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ABSTRACT

This volume was prepared for the National Institute on Drug Abuse as part of a Research Issues Series, and summarizes the major research findings in the area of drugs and attitude change which have been published in the last 15 years. The booklet is organized to provide the reader with the purpose, methodology, findings, and conclusions of previous studies done in this area. Topics include: (1) information about drugs--sources of information, the media, drug education; (2) attitudes toward drugs--users vs. nonusers, attitude change; and (3) communication processes. (Author/PC)

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DRUGS AND ATTITUDE CHANGE

Nonmedical Drug Use:
Attitudes and Attitude Change

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Cover Illustration

William Blake. The figure of Urizen or the Ancient of Days.
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FOREWORD

The issues of drug use and abuse have generated many volumes of words, all written in an attempt to explain the "problem" and suggest the "solution." Data have been generated by researchers from many disciplines, each looking at a particular aspect of an issue. The present booklet is one of a new series intended to aid researchers who find it difficult to find the time to scan, let alone read all the information which exists and which continues to be published daily in their area of interest. An attempt has been made to focus predominantly on empirical research findings and major theoretical approaches.

Included in volumes 1 through 7 of the series are summaries of the major research findings of the last 15 years, formulated and detailed to provide the reader with the purpose, methodology, findings and conclusions of previous studies done in the topic area. Each topic was chosen because it represented a challenging issue of current interest to the research community. As additional issues are identified, the relevant research will be published as part of this series.

Several of the volumes in the series represent a departure from the above description. These also represent challenging issues, and issues of current interest; they are, however, virtually unexplored areas which have received little attention from the research world. For example, the subjects of drugs and the visual arts, science fiction, and fiction--aspects of contemporary life which impact on all of us--are explored here by writers who have been deeply involved in those fields. Their content is perhaps provocative, and certainly stimulating.

The Research Issues series is a group project of staff members of the National Institute on Drug Abuse, Division of Research, Behavioral and Social Sciences Branch. Special thanks are due to the continued guidance and support of Dr. Louise Richards and Dr. Norman Krasnegor. Selection of articles for inclusion was greatly aided by the suggestions of a peer review group, researchers themselves, each of whom reviewed a topic of particular interest. It is my pleasure to acknowledge their contribution to the project here.

Dan J. Lettieri, Ph. D.
Project Officer
National Institute on Drug Abuse

ACKNOWLEDGMENTS

A bibliographic project such as this necessarily involved a great number of people, all of whom contributed their own particular talent. Many worked on more than one phase of the project. Many more are not named here--their help and advice was instrumental in shaping and defining the series and the individual topics. It is important, however, to distinguish between the members of the peer review group who were instrumental in the initial selection of the articles to be included and abstracted, and the members of the abstracting team who bear sole responsibility for the final format and content of the abstract of each research paper included in this volume.

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PREFACE

An extensive and comprehensive literature search was carried out to identify materials for inclusion in the Research Issues series. Major clearinghouses, data bases, library collections, and previous bibliographies were searched, either through an automated system or manually. Special efforts were made to correspond with organizations, institutions and individuals who might have relevant materials. Current issues of newsletters and journals were scanned throughout the project. A selective list of the sources accessed includes:

National Clearinghouse for Drug Abuse Information (NCDAI)

NCDAI: Report Series, Selected Reference Series

Drug Abuse Current Awareness System (DACAS)

SPEED: The Current Index to Drug Abuse Literature

Grassroots

Addiction Research Foundation, Bibliographies

Drug Dependence

Psychological Abstracts (PASAR)

Sociological Abstracts

Dissertation Abstracts

Index Medicus (MEDLINE)

Addiction: Bioresearch Today

Research in Education (ERIC: RIE)

Public Affairs Information Service (PAIS)

Monthly Catalog of U.S. Government Documents

Music Index

Art Index

Guide to the Performing Arts

Reader's Guide to Periodical Literature

The criteria for selection of documents were drawn up by a consultant group of drug researchers working with the contractor and representatives of the National Institute on Drug Abuse. For inclusion a study had to meet the following general criteria:

(1) empirical research studies with findings pertinent to the particular topic, or major theoretical approaches to the study of that topic

(2) published between January 1958 and January 1974, preferably in the professional literature, with the exception of certain older "classics" which merited inclusion and unpublished dissertations

(3) English language; however, since the focus was on American drug issues, those English language materials which dealt with aspects of drug use encountered largely in other countries were excluded.

After a first review of citations and annotations, to weed out obviously irrelevant materials, the body of collected literature was subjected to two reviews: one to ensure that materials met the selection criteria, and a second by a peer review group to ensure that studies representative of the universe were included.

TABLE OF CONTENTS

		Page
I.	INFORMATION ABOUT DRUGS	1
I.01	Sources of Information	2
I.08	The Media	23
I.17	Drug Education	54
II.	ATTITUDES TOWARD DRUGS	94
II.01	Users vs. Nonusers	95
II.09	Attitude Change	122
III.	COMMUNICATION PROCESSES	134

I. INFORMATION ABOUT DRUGS

Smart, Reginald G.; Krakowski, Mark. Selective exposure to information about the harmful effects of marijuana and tranquilizers. Journal of Drug Education, 2(3):279-288, September 1972.

DRUG	Cannabis; Tranquilizers
SAMPLE SIZE	578
SAMPLE TYPE	Students
AGE	Adults
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Canada
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	14

SUMMARY

This paper examined the tendency of drug users to selectively expose themselves to information about drugs. The sample consisted of marijuana and tranquilizer users and non-users.

Previous studies had found that people tend to avoid information in conflict with their current beliefs or behavior. This study hypothesized that frequent drug users would more often avoid information on the harmful aspects of taking their drug than would infrequent users.

Lists of magazine articles on a variety of subjects, including titles on the harmful and benign nature of marijuana and tranquilizers, were distributed to 344 university students and 234 students and adults, respectively.

Subjects were asked to rank the titles in order of preference. The subjects believed they would read the articles selected directly after making their selection. A questionnaire about the drug followed the ranking of titles.

Results of a two-factor analysis of variance for rankings of drug titles showed no evidence for selective exposure among marijuana or tranquilizer users.

METHODOLOGY

The sample for this study consisted of 238 undergraduate and adult students who were administered the procedures for tranquilizers and 344 undergraduate and graduate students given the procedures for marijuana.

The main design involved a pair of 2 x 4 factorial arrangements with the dependent variable being the preference rankings of magazine article titles. Independent variables were: (1) a classification into nonusers and three types of users based on frequency of use and, (2) two types of magazine articles about the drug, one about harmful effects and one about its safety.

A brief questionnaire concerning the drug followed the ranking of title. The questions concerned frequency of use, attitudes about the harmfulness, dependency, liability of the drug and whether use should be discouraged.

FINDINGS

Results of a two-factor analysis of variance (type of title and use or nonuse of marijuana or tranquilizers) for the rankings of the drug titles showed no evidence for selective exposure among marijuana or tranquilizer users. There were no differences among nonusers, infrequent, moderate, and heavy users in their tendency to expose themselves to information on the harmful or beneficial effects of their drug. The degree of commitment in terms of frequency of drug use and certainty about attitudes also seemed to have little relationship to exposure.

Selective exposure seemed unrelated to drug use and to certainty about various aspects of the harmful effects of drugs.

CONCLUSION

This study failed to achieve the expected results of selective exposure among marijuana or tranquilizer users. One explanation could be that marijuana and tranquilizer use is an activity to which little emotional

commitment develops. The authors conclude, "These data suggest that drug education efforts are probably not losing their effectiveness because users refuse to initially expose themselves to information about harmful effects." Perhaps selective attention and not selective exposure will be a problem in drug education.

Kowitz, Albert C.; and Clark, Richard C. Ways Youth Receive Information about Marijuana. Paper prepared under NIMH Grant MH 20595-01. 23 pp

DRUG	Marijuana
SAMPLE SIZE	300
SAMPLE TYPE	Students
AGE	Children and Adolescents
SEX	156 Male and 144 Female
ETHNICITY	White
GEOGRAPHICAL AREA	Sacramento, California
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews and Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	18

SUMMARY

This study sought to describe the types of information sources used by 300 middle class 5th, 7th and 11th grade students in various stages of acquaintance with marijuana. During individual meetings with experienced, trained female interviewers, students were asked to relate sources which were most influential in providing information about marijuana at the following stages: (1) awareness, (2) interest, (3) evaluation, (4) trial, and (5) adoption. Sources were categorized by experimenters as either personal, impersonal, control, or noncontrol.

Results indicated significant shift in types of sources of information at different grade levels. Suggestions for drug abuse programming were offered.

METHODOLOGY

Three hundred experimental subjects were selected at random from the 5th, 7th and 11th grades in 3 Sacramento, California schools. All subjects were White from predominantly middle-class homes.

Subjects were interviewed singly in schools, and interview lengths varied from 10 to 40 minutes. Questions were presented verbally to subjects by interviewers who were encouraged to remain faithful to the wording of each question.

Three questions dealt with awareness of marijuana, 2 questions asked for sources of information, 5 questions determined interest, 7 questions determined evaluation, 9 questions focused on the trial stage, and 3 questions concerned decisions to adopt or continue using marijuana.

Ten females with prior interviewing and/or counseling experience were employed. Interviewers received 1 week of intensive training. They were not informed of the hypothesis or the goals of the research.

The subjects were told that they were participating in a survey of drug use, that they had a right to withdraw at any point and their interview would be destroyed, their answers would be kept in complete confidence, and they would have an opportunity to see the way their answers were recorded after the interview was concluded.

Four categories of sources were used in the study: control (parents, teachers, etc.), noncontrol (movies, music, other peers, siblings), personal (parents, teachers, ministers, doctors), and impersonal (TV, movies, radio).

Subjects were asked to relate sources which were most influential in providing information about marijuana at the following stages: (1) awareness, (2) interest, (3) evaluation, (4) trial, and (5) adoption.

FINDINGS

The sources of information mentioned most frequently by all students were parents, television, and friends.

When students were asked where they learned what they knew about marijuana, 5th graders mentioned TV and parents, 7th graders friends and TV, and 11th graders friends and other students.

Younger children used more socially approved sources, 7th graders used a mixture of sources, and 11th graders used personal non-control, or "nonauthority" sources. When 7th and 11th graders were asked for their sources of information and reasons for using the drug, they tended to cite pleasurable psychological experiences with marijuana rather than personal influence processes.

Reasons given for not using the drug concerned expectation of physical pain, rather than psychological discomfort or sociolegal restraints.

CONCLUSIONS

The authors felt that the most interesting finding was that 2/3 of all students surveyed at all grade levels were not actively interested in marijuana. The majority appear to be passive receivers of information about the drug.

Results indicate the need for experimental investigation of the control, personal, and grade variables. The authors suspect that learning about marijuana is a function of an interaction among those 3 factors.

The authors also suggest that a pilot project attempt to make students more aware of personal and social pressures which serve to push them toward marijuana use. Personal influence process training would be most helpful for the transitional seventh graders. Seventh grade students may profit most from training to tolerate conflicting claims about drugs, and 5th graders appear to need preparation for the great increase in the type of influence they will encounter in the future.

Fejer, Dianne, et al. Sources of information about drugs among high school students. Public Opinion Quarterly, 35(2): 235-241, Summer 1971.

DRUG	Cannabis; Multi-Drug
SAMPLE SIZE	12, 554
SAMPLE TYPE	Students
AGE	Adolescents
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Toronto, Montreal, and Halifax, Canada
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	1968-1969
NO. OF REFERENCES	11

SUMMARY

Many high school drug education programs have been designed and implemented in Canada, but there have been few studies on the effectiveness of methods or media. The present study attempted to discover which sources--school, family, news media, friends, or personal experience--students used most for information on drugs and which most influenced their attitudes toward drugs. Drug users, non-users, and students who showed a desire to try drugs were compared. For the general population of students drug education via the news media was found to be the most effective and most influential. Research is needed to determine the reason for this finding and how other sources may become more effective.

METHODOLOGY

The data for the study were taken from surveys conducted in three Canadian cities:

- Toronto, April 1968, 6,447 students, grades 7, 9, 11, 13
- Montreal, April 1969, 4,501 students, grades 8, 10, 12, 14
- Halifax, April 1969, 1,606 students, grades 7, 9, 11, 12.

Anonymous questionnaires were administered to a random sample of the student population, inquiring about frequency of use of 10 drugs during the past 6 months, and about social, demographic, and other related factors. The present study utilized the responses to 4 questions that were asked in all three cities. Three multiple-choice questions were asked: (1) from which information sources did students learn most: family, friends, the news media, church and school, or his own experience?; (2) which source led the student to decide that marijuana was safe; and (3) the source that helped the student decide that marijuana was harmful. These questions were cross-tabulated with a general question asking whether the student had used drugs, would like to try drugs, had not and would not use drugs. Chi-square tests of significance were performed on all responses.

FINDINGS

Sources of Information From Which Students Learned the Most

The news media was the most important source of information in all three cities (the combined sample) and the most frequently reported within each city. However, the extent of use of information sources varied with the city and with the students' inclination to use drugs. Montreal students relied most heavily on news media. Toronto next, Halifax least. Family was of minor importance in all cities. School and church were cited more in Montreal and Halifax than in Toronto.

In Toronto 34.2% of the "users" learned about drugs from friends, 30.3% from experience. Forty-nine percent of those who "might use" and 58.5% of those who wouldn't use drugs learned from the media. Family, church, and school were least influential in all groups. In Halifax 36.7% of "users" learned from friends, 33.9% from experience. Of the "might use" 45.7% learned from friends, and 38.8% from the media. The "won't use" relied most on the media but 26.6% depended on church and school.

In Montreal the media accounted for 66% or more of the answers in all groups. Friends played a negligible part; church and school were a moderate source of information.

Sources Most Influential in Shaping Attitudes Towards Marijuana

Data on this question were taken from Toronto and Halifax only, as the Montreal data contained major inconsistencies. Sixty-two percent of the students thought marijuana was harmful and reported the media as being the most influential source, family and friends next. Of those who thought it safe, 14.2% were influenced by the media and 12% by friends. Among "users," most felt that marijuana was safe, and approximately 40% used personal experience to decide this, 20% friends, while the media and family were of least importance. Those who felt it was harmful reported being more influenced by the media.

Among the "might use," more felt it would be harmful than among the users, and both friends and the media were cited for this decision. A substantial group, however, felt it was safe, and here the media was the most influential source.

The "won't use" group generally felt marijuana was harmful. Over 50% had been influenced by the media, 17% by family.

CONCLUSIONS

The news media is seen as the most effective and influential source of drug information for most students. Over 50% learned most from it, and almost 50% of those who felt marijuana was harmful attributed their opinion to it. Family, friends, school, and church played minor roles.

The influence of the source was shown to be dependent on whether students were users or not. The students who were non-users relied on the media. Users relied on experience or friends.

Thus the authors concluded that the purposes and target population of drug education must be well defined. Preventative drug education can be presented by the media, but users must be reached through personal contact.

Some possible reasons for the effectiveness of the impact of various information sources are suggested. The news media is repetitive, gives greatest exposure to drug information, and has high credibility. It is more impersonal than teachers and parents who are viewed as motivated to prevent use rather than provide unbiased information. For users, impact is greater if the receiver can identify with the source, and if the appeal is not too anxiety-provoking. More research is needed to determine why the media is influential, how other sources can become more effective, and what appeals best to users. Drug education programs will continue to fail until more effective methods are developed.

Becker, H.S. Becoming a marihuana user. American Journal of Sociology, 59:235-242, 1953.

SUMMARY

The study is concerned with accounting for the presence or absence of marihuana use in an individual's behavior. The author rejects the common approach in which researchers have sought to identify individual psychological traits which differentiate marihuana users from nonusers and which are assumed to account for use of the drug. Becker questions the premise that a given kind of behavior in an individual can best be explained as a result of some trait which predisposes or motivates him to engage in the behavior.

Rather, he argues that the presence of a given kind of behavior is best explained as the result of a sequence of social experiences during which the person acquires a conception of the meaning of the behavior, and perceptions and judgments of objects and situations, all of which make the activity possible and desirable. The motivation or disposition to engage in the activity is built up in the course of learning to engage in it and does not antedate this learning process. For such a view it is not necessary to identify those "traits" which "cause" the behavior. Instead, the problem becomes one of describing the set of changes in the person's conception of the activity and of the experience it provides for him.

The study attempts to arrive at a general statement of the sequence of changes in individual attitude and experience which have always occurred when the individual has become willing and able to use marihuana for pleasure and which have not occurred or not been permanently maintained when this is not the case.

The author notes that (1) the predispositional theories now current cannot account for that group of users who do not exhibit the trait or traits considered to cause the behavior and (2) such theories cannot account for the great variability over time of a given individual's behavior with reference to the drug. The same person will at one stage be unable to use the drug for pleasure, at a later stage be able and willing to do so, and, still later, again be unable to use it in this way.

These changes, difficult to explain from a predispositional or motivational theory, are readily understandable in terms of changes in the individual's conception of the drug. A person cannot begin to use marihuana for pleasure, or continue its use for pleasure, unless he learns to define its effects as enjoyable, unless it becomes and

remains an object which he conceives of as capable of producing pleasure.

METHODOLOGY

Fifty interviews were held with marihuana users from a variety of social backgrounds and present positions in society. The interviews focused on the history of the person's experience with the drug, seeking major changes in his attitude toward it and in his actual use of it and the reasons for these changes.

FINDINGS

The author notes that the same sequence of changes in attitude occurred in every case known to him in which the person came to use marihuana for pleasure. These sequences are the following:

Step I

A person must learn to use the proper smoking technique in order that his use of the drug will produce some effects in terms of which his conception of it can change. Only when this is learned is it possible for a conception to emerge of the drug as a pleasure object. Otherwise, marihuana use is considered meaningless and not to be continued.

Step II

The presence of the effects of the drug alone does not automatically provide the recognition of the experience of being high. The user must be able to point the effects out to himself and consciously connect them with his having smoked marihuana. Otherwise, regardless of the actual effects produced, the smoker will consider that the drug has had no effect. In every case in which use continues, the user has acquired, from other users, the necessary concepts with which to express to himself the fact that he was experiencing new sensations caused by the drug. For use to continue, it is necessary not only to use the drug so as to produce effects but also to learn to perceive these effects when they occur.

The ability to perceive the drug's effects must be maintained if use is to continue; if it is lost, marihuana use ceases.

Step III

In the final step the user must learn to enjoy the effects he has just learned to experience. Marihuana-produced sensations are not automatically or necessarily pleasurable. It is only after a taste for it is built up and sought after, that use for pleasure continues. It is quite common for an experienced user to suddenly have an unpleasant or frightening experience, which he cannot define as pleasurable. He may blame it on an overdose and simply be more careful in the future. But he may make this the occasion for a rethinking of his attitude toward the drug and decide that it no longer can give him

pleasure. When this occurs and is not followed by a redefinition of the drug as capable of producing pleasure, use will cease.

CONCLUSION

In comparing this theory with those which ascribe marihuana use to motives or predispositions rooted deep in individual behavior, the author concludes that the evidence makes it clear that an individual will be able to use marihuana for pleasure only when he goes through a process of learning to conceive of it as an object which can be used in this way. No one becomes a user without (1) learning to smoke the drug in a way which will produce real effects; (2) learning to recognize the effects and connect them with drug use (learning, in other words, to get high); and (3) learning to enjoy the sensations he perceives.

The use of marihuana for pleasure depends on a transformation of meanings in which the person develops a new conception of the nature of the experience rather than any personal makeup or psychic problem.

In the course of this process he develops a disposition or motivation to use marihuana which was not and could not have been present when he began use, for it involves and depends on conceptions of the drug which could only grow out of the kind of actual experience detailed above. On completion of this process he is willing and able to use marihuana for pleasure.

The author suggests that behavior of any kind might fruitfully be studied developmentally in terms of changes in meanings and concepts, their organization and reorganization, and the way they channel behavior, making some acts possible while excluding others.

Bogg, Richard A., et al. Drug Dependence in Michigan Including a Study of Attitudes and Actions of the Young People of Michigan. Lansing, Michigan: Michigan State Dept. of Public Health, June 1969. 158 pp.

DRUG	Multi-Drug
SAMPLE SIZE	1,379
SAMPLE TYPE	Students
AGE	Adolescents
SEX	Both Male and Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Michigan
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	1968
NO. OF REFERENCES	2

SUMMARY

The reported survey was carried out in 1968 by the Michigan Department of Public Health, the Department of Sociology at Michigan State University and the Maternal and Child Health Research Program at the University of Michigan.

The study had 3 objectives: (1) determine utilization rates for public high school seniors of a list of substances including marijuana; (2) determine correlates of drug utilization; and (3) acquire information relevant to drug education.

Eleven Michigan high schools were selected to reflect the demographic, economic and racial diversity of the state. Questionnaires were administered.

The data appeared to support the thesis that drug use by young people, particularly use of marijuana, represents a social form of recreation far removed in nature from the traditional problem of narcotics addiction or alcoholism. Marijuana smokers were definitely more likely to be tobacco users. Virtually all marijuana smokers were drinkers. The authors called for greater understanding by adults of the needs and aspirations of young people.

METHODOLOGY

Eleven schools throughout the state of Michigan were sampled, including rural and urban, private and public, from communities ranging in size from under 2,500 to over 100,000.

Students were administered questionnaires in classrooms and study halls. Students were cited pertinent statutes safeguarding the confidential character of the research studies. The questionnaires were administered while students were in familiar locations, among friends.

FINDINGS

Use of tobacco was found to be very common; 37-56% of the urban students smoked, while a little over 1/4 of the rural students smoked. Consumption of alcoholic beverages varied from 49% to 81%, with no consistent rural-urban differences. Actual marijuana use ranged from 0% to 33%, the highest in urban areas.

Marijuana smokers were definitely more likely to be tobacco users. Virtually all marijuana smokers drank alcohol. Marijuana smokers were somewhat less likely to participate in school, community and religious activities.

Roughly 1/2 of the seniors had college plans. Over 2/3 considered marijuana as harmful to the mind and body; the remainder considered it harmless.

When asked to rank sources on drug education, low rankings were given to school counselors, police officers, clergy, health and safety teachers. High rankings were given to physicians.

CONCLUSIONS

The strong associations between use of marijuana and use of alcohol/tobacco deserve closer study. The information that students receive from parents, mass media and schools is conflicting and would seem to permit or even encourage the spread of marijuana as a recreational and experimental drug. The use of drugs by young people appears to be expanding. Greater benefits could result if adults offered more understanding of the needs and aspirations of young people.

Blum, Richard; Blum, Eva; and Funkhouser, Mary Lou. Rejection and acceptance of LSD: Users and controls compared. In: Richard Blum and Associates, Utopiates: The Use and Users of LSD-25. New York: Atherton Press, 1964. pp. 90-117.

DRUG	LSD.
SAMPLE SIZE	118
SAMPLE TYPE	Volunteer
AGE	Adults
SEX	Male and Female
ETHNICITY	White
GEOGRAPHICAL AREA	California
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews, Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	5

SUMMARY

Forty-seven persons who had the opportunity to take LSD but failed to do so were compared with 71 persons in the same circumstances who had taken it.

The data supported a finding of consistent differences between persons who accepted and those who rejected LSD.

Important factors in rejecting or accepting LSD were the kind of information one has about LSD and corresponding expectations. These depended upon the year it was offered, one's occupation and social contacts.

Rejectors described the drug as producing undesirable changes or none at all; accepters observed that it was highly beneficial.

METHODOLOGY

Two groups were compared. One consisted of 47 persons who had the opportunity to take LSD but failed to do so; this group was compared with 71 persons in the same circumstances who had taken LSD. Among the 47 controls, 30% had been offered LSD in an experimental setting such as a hospital or university, 30% had been offered it in an informal professional setting, 32% had been offered it in a situation where the potential initiator was a nonmedical person offering it in a social setting, and 19% received it from a staff member at a religious-medical center. Many of the control group members were acquainted with or married to LSD users.

FINDINGS

The majority of persons in both groups were highly educated, white, Anglo-Saxon, married, and Protestant. LSD accepters were more often younger, religiously active, male, and single.

If an LSD-taking husband asked his wife to take LSD, she did so. Among the control women who refused, divorce followed in each case. It was concluded that the husband was the "gatekeeper" for LSD in terms of the spouse's role in initiation.

An important factor in LSD diffusion was the power or the status of the initiator vis-a-vis the potential initiate. When a person in an institutionally responsible or superior role offered the drug to one with less status or power, the chances were considerably greater that the drug would be accepted.

Proselytizing extends down kinship lines, husband to wife, occasionally wife to husband, older brother to younger sister, and cousin to cousin, and sometimes children to parents.

The year in which LSD was offered affected the kind of information subjects had about the drug as well as the expectations. Persons offered LSD before the drug movement got under way more often

rejected the drug. Those who were influenced by the drug movement and who believed the drug to be of personal, social, or artistic benefit were more likely to accept it. Those who expected unpleasant LSD results were much less likely to take the drug than those who expected pleasant results. The kind of information people have about LSD prior to being offered the drug plays a role in their decision.

Those who accepted the drug were more often characterized as ethnocentric, free from anxiety, and free from fear of loss of self-mastery.

CONCLUSION

Drug accepting behavior did appear to vary in the predicted direction with the kind of information a person possesses, with his or her relationship to the potential initiator in terms of power and status, with the personality of the person with reference to anxiety, ego control and trust-distrust, and with the life circumstances of the person.

Hanneman, Gerhard J.; et al. Televised Drug Appeals: A Content Analysis. Drug Abuse Information Research Project Report No. 1. Storrs, Connecticut: University of Connecticut Communication Research Program, March 1972. 18 pp.

DRUG	Multi-Drug
SAMPLE SIZE	85 TV Presentations
SAMPLE TYPE	TV Presentations
AGE	Not Applicable
SEX	Not Applicable
ETHNICITY	Not Applicable
GEOGRAPHICAL AREA	Hartford, Connecticut
METHODOLOGY	Descriptive
DATA COLLECTION INSTRUMENT	Observations
DATE(S) CONDUCTED	December 16-31, 1971
NO. OF REFERENCES	23

SUMMARY

This study was based on the premise that television is the largest possible base for mass communication and can therefore be the most important instrument to fight drug abuse. Studies have shown that television has worked as a high influence on proprietary drug use, and a moderate influence on friends' use of illicit drugs.

In order to properly apply public service announcements (P.S.A.'s) to the television media it must be known to what degree the P.S.A.'s are successful. Due to the lack of an adequate data base regarding the mass media's role in the dissemination of public service information, this study took place. The data gathered ascertains the qualitative

and quantitative aspects of televised drug abuse advertising. The resulting data provides information for future hypothesis-testing investigation into the realm of public service communications and the availability of drug abuse information for audience awareness.

Drug abuse appeals in general were broadcast during times of lower audience attendance. These messages were found to include little specific information, were not directed at identifiable audience segments, and habitually involved the use of an actor or sports figure with some kind of fear message.

METHODOLOGY

This study was primarily conducted in the Hartford, Connecticut Metropolitan viewing area during the time span of December 16-31, 1971. The three commercial networks (ABC, CBS, NBC) were monitored along with many independent stations situated in cities of surrounding states as well as independents in Florida and California. Coding was performed by 22 coders working 6-hour blocks from the sign-on time to the sign-off time.

A coding instrument was used which covered 19 variables. The variables which this study is primarily concerned about are: the location and times of appearance of the P.S.A., the sponsor, the type of people depicted, the apparent audience intended, the physical and social effects of drug abuse shown or discussed, and the paraphernalia discussed, shown, or shown being used.

FINDINGS

This study shows that during the 2-week period there was a total of 85 presentations consisting of 32 different drug abuse messages. Three of these 32 messages accounted for 52% of the total presentations. Sixty-three and one-half percent of the messages were sponsored by the National Clearinghouse for Drug Abuse Information, while 7% were sponsored by the Advertising Council, 6% by State Governments, and the remaining 24% by various other agencies.

Of the drug abuse messages observed, 67% involved appeals by celebrities; 42% made reference to the harmful social and/or physical consequences of drug abuse; most of the messages gave only general information on drug abuse (only 13% gave specific data, consummatory evidence, or statistics); only 18% of the messages were clearly slanted toward young people. Blacks appeared in 27% of the messages but only 6% of the P.S.A.'s were directed explicitly toward Blacks; and over 90% of the drug abuse messages observed were broadcast at times of typically lower attendance.

This study shows that the lack of previous studies of this kind has hurt the potential effectiveness of P.S.A. drug abuse messages. This study suggests that better time-slots, more specific information, more specific target groups, and the usage of more credible message communicators would improve the effectiveness of P.S.A. messages.

CONCLUSIONS

The authors feel that the next necessary step toward effective P.S.A.'s is the development of an informational base regarding the target audiences and the actual and potential effects which mediated drug abuse information can generate among these groups. Message producers, operating in the absence of concrete audience data, have hurt the P.S.A. program. What is needed is more concrete data and more studies of those groups being appealed to and what actually is appealing to them.

McEwen, William J., and Wittbold, George H. Dimensions of Response to Public Service Drug Abuse Information. Drug Abuse Information Research Project Report No. 2. Storrs, Connecticut: University of Connecticut Communication Research Program, April 1972. 21 pp.

DRUG	Multi-Drug
SAMPLE SIZE	114
SAMPLE TYPE	Students
AGE	114 Adults
SEX	Both Male and Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	University of Connecticut
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	19

The authors focused on the development of a set of measures which would describe relevant responses made by viewers of anti-drug abuse information films. They felt that an investigation into the effectiveness of anti-drug abuse strategies must begin with a systematic examination of the reactions exhibited by members of the intended target audience. An instrument containing 82 descriptor terms was compiled from a pre-test conducted with 92 college students and from other research studies.

The subjects for the main body of the study consisted of 5 classes with a total of 114 students. Each group of subjects saw one film, and rated the degree to which each of the 82 terms described the way they felt about the film.

A factor analysis of the questionnaires resulted in a four factor solution, as follows:

I. Relevant Persuasion
II. Negative Evaluation
III. Creative Stimulation
IV. Hard Sell

The authors felt the instrument would be important for examining viewer responses to various drug abuse information strategies. They stated the need for further testing to achieve instrument reliability and validity.

METHODOLOGY

The study was conducted to develop a set of measures that could describe relevant responses exhibited by a college student population toward anti-drug abuse commercials.

In order to obtain descriptive terms that were potentially applicable to the expression of receiver response, the researchers conducted a pretest. They chose three 16mm color sound anti-drug abuse commercials which represented a range of types of appeals (e. g., celebrity endorsement, fear appeal) and a range of types of illicit drugs (speed, LSD, marijuana). Four groups of students, totaling 92 subjects, participated in the pretest. Each group viewed one film and filled out a self-administered questionnaire that asked them 1) to describe the film (e. g. colorful, educational, boring); and 2) to describe their personal reactions while viewing the film. Responses were tabulated and analyzed to assist in generating a word pool. Thirty descriptors were selected from the pretest; another 52 terms were chosen from lists compiled by other researchers.

Subjects for the main investigation consisted of 5 classes, separate from those used for the pretest, totaling 114 students. Subjects were shown one of 5 16 mm color sound anti-drug abuse films (the original 4 plus one additional comparable film). They then filled out a questionnaire rating the applicability of each of the 82 terms in describing the film. Data obtained were subjected to correlational analysis and factor analysis.

FINDINGS

Factor analytic solutions were obtained in all cases using the criterion that each factor must have at least three descriptor terms which loaded highly (at least . 40) and purely (less than . 30 on any other factor) in order to be retained. The factor analysis produced a four factor solution. Sixteen of the 82 items were eliminated because they did not load highly on any factor. The labeling of the four factors and the percentage of the total variance that each represented are in the table below:

Factor	Percentage of Total Variance
I. Relevant Persuasion	54.6
II. Negative Evaluation	23.4
III. Creative Stimulation	12.7
IV. Hard Sell	9.4

The Relevant Persuasion factor contained descriptor terms which showed a positive reaction to the films (convincing, sincere, made sense). The Negative Evaluation factor demonstrated general negative response to drug abuse information (worthless, dull, absurd). Factor III, Creative Stimulation, reflected the uniqueness and originality of the films (creative, original, novel). The last factor, Hard Sell, demonstrated the fear-arousing emotional impact (scary, depressing, thought provoking).

CONCLUSIONS

The authors felt that the labels applied to the four dimensions of receiver response were not as important as the potential for using such an instrument to examine viewer responses to various drug abuse information strategies. They suggested additional research to determine the reliability, validity and sensitivity of the questionnaire. Additionally, they stated that the perceptual structure of various subpopulations should be examined to assess possible differences (drug users, minorities, children, etc.). They suggested that the instrument be tested for possible use as a predictor of behaviors. For example, studies could examine those commercials seen as highly novel to determine whether behavioral indices of arousal (e.g. physiological measures such as GSR) substantiate the predictions made on the basis of perceptual judgments.

Hanneman, Gerhard J. Dissemination of Drug Related Information. Drug Abuse Information Research Project Report No. 3. Storrs, Connecticut: University of Connecticut Communication Research Program, April 1972. 37 pp.

DRUG	Cannabis Hallucinogens Depressants Opiates Stimulants
SAMPLE SIZE	407
SAMPLE TYPE	Students
AGE	Adults
SEX	Both Male and Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Storrs, Connecticut
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	38

SUMMARY

This study focused on the role of nonmedia sources in relationship to the traditional media in disseminating information about drug abuse and treatment. It also explored the relationship between information seeking and the convenience and believability of available drug abuse information sources.

The author conducted a literature search and found that the relative importance of the mass media as a source of drug information has been documented. In addition to media, other sources

about drugs are the various expert agencies, e.g., the National Clearinghouse for Drug Abuse Information, special newsstand sources, write-in sources, school drug abuse education units, health services, telephone drug information lines, and most often, friends. Youth is broadcast oriented; thus the efficacy of using print media for the young is questionable. Abuse information proliferates without any data about effectiveness in creating awareness attitudes about drug use or decreasing drug incidence.

An experiment was conducted at the University of Connecticut among college students enrolled in an upper level communication course. The questionnaire was designed to obtain data on the information seeking habits of subjects with regard to a specified illicit drug and included items measuring the relative utility of one source over another. From alternatives, subjects were asked about sources creating awareness, which source would be chosen for information about treatment of the described drug, what source would be consulted when contradictory information existed, the convenience of the sources, and believability of sources.

Data supported the following hypotheses and statements: (1) Friends provide initial awareness about marijuana and amphetamines, but friends and media content generate awareness in equal proportion about other drugs. With the exception of marijuana and amphetamines, media content and drug abuse ads account for the greater amount of initial awareness about drugs; (2) Drug abuse information seekers prefer friends and professional sources over governmental agencies in all cases; (3) Although friends are the single most popular source of drug abuse information about cannabis, professional and quasi-professional sources are preferred about noncannabis drugs; (4) The most convenient source of drug abuse information is friends.

Additionally, a considerable difference in communication activity between drug users and nonusers emerged from a finer analysis of hypothesis data.

METHODOLOGY

Subjects were 407 college students in various sections of an introductory communication course and an upper level communication course at the University of Connecticut. Subjects completed one of five versions of a self-administered questionnaire during part of a class period. Versions were randomly distributed and each survey was identical, with the exception of the cover sheet which made reference to one of five drug categories: amphetamines,

barbiturates, cannabis, psychedelics, and opiates. Students were instructed that the survey referred only to the specific drug category listed on the cover and that only this category should be considered when answering the items. Data were analyzed for each category.

The questionnaire was divided into three sections. The first obtained data about information seeking habits of subjects, with regard to a specified drug. Subjects were provided with forced-choice alternative drug abuse information sources. The second section contained variables describing past and present drug use of the subject. A demographic section as well as the media habit descriptions provided comparisons, cross-break splits, and independent predictors for examining information seeking. This section included items about age, school background, information about parents, student's financial situation, etc. This section also included items about media selection.

FINDINGS

The final sample included 86 amphetamine respondents, 83 barbiturate respondents, 88 cannabis respondents, 69 psychedelics respondents and 81 opiates respondents.

Data provided support for the hypothesis that friends are more likely to be identified as the source of first awareness about marijuana than other sources. However, the data did not provide support for the theory that media would be cited more than other sources in creating initial awareness about noncannabis drugs. With the exception of amphetamines, respondents did indicate media as often as friends as sources of initial information about drugs. Still another hypothesis was confirmed in that all information seekers preferred friends or professional sources over governmental agencies.

It appeared that those seeking drug abuse information about cannabis chose friends in about the same proportion as other professional sources when latter sources were lumped together; however, the single most popular source of drug abuse information about cannabis was friends, chosen by 34.5% of the respondents.

There was little difference between the proportions of nonusers and users citing the media as a source of drug abuse information, thus providing no support for the hypothesis that nonusers will more likely cite media as an information source. While proportions of users selecting friends or professional sources were equal

(50% in each case), among nonusers the proportions were considerably different, with only 26% identifying friends as a source of information but 74% identifying professional sources or telephone lines. Nonusers were "other oriented" in where they sought information, while in comparison, users relied more on friends as well as placing reliance on their own experiences and their reading in pharmaceutical books.

Even though respondents might identify a particular source to which they would go for drug abuse information, it is likely that the multiplicity of available sources, coupled with the probable availability of self-proclaimed knowledgeable friends may lead to confusion or uncertainty about competing information. An average of almost one half the respondents preferred to seek additional information from a doctor or health center clinic. Media was identified as the second conflict-resolving choice and friends was selected as the third choice. Users would seek the media more than nonusers. However, friends were clearly identified as the most convenient source of drug abuse information by 60% of the respondents. In terms of believability, users overwhelmingly preferred friends, while nonusers preferred outside sources.

In addition to hypothesis testing and related analysis, post hoc chi square analyses of additional data indicated various relationships. On the basis of the data base, 128 users were identified and a "user profile" was drawn up.

CONCLUSIONS

The author concluded that with the exception of marijuana and amphetamines, media content and drug abuse ads do account for the greatest amount of initial awareness about drugs. Friends provided initial awareness about marijuana and amphetamines while friends and media generated awareness in equal proportion about other drugs. Although friends were the single most popular source of drug abuse information about cannabis, professional and quasi-professional sources were preferred about noncannabis drugs. Friends and professional sources were preferred over governmental agencies in seeking drug abuse information, and the most convenient source of drug abuse information was friends.

The data gathered supported the author's contention of the presence of a multidimensional drug use continuum. This continuum would explain the relationship among type of drug, its perceived risk, strength of attitudes, etc. The data supported the theory that for the "softer" drugs, less professional sources are solicited for drug abuse information than for harder drugs. Additionally, a

considerable difference in communication activity (information seeking and opinion leadership) between drug users and nonusers emerged.

In considering the role of nonmedia sources, the author concluded that when faced with conflicting information from friends and other sources, media does become the second conflict-resolving choice for both users and nonusers, even ahead of friends in both groups. It was suggested that the government's dual role (education and enforcer) in the area of drug abuse is not amenable to lending maximum credibility to an information campaign. The influence of peer groups and reference groups in mediating the impact of the mass media was supported by the data collected in this study.

Hanneman, Gerhard J., and Pet, Marilyn L. The Search for Drug Abuse Information. Drug Abuse Information Research Project Report (revised) No. 4. Storrs, Connecticut: University of Connecticut Communication Research Program, April, 1972. 20 pp.

DRUG	Not Specified
SAMPLE SIZE	418 Calls
SAMPLE TYPE	Callers to Drug Hot Line
AGE	Not Specified
SEX	Both Male and Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Hartford, Connecticut
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Telephone Calls
DATE(S) CONDUCTED	January 2, 1970 to April 5, 1970 and November 1, 1971 to February 27, 1972
NO. OF REFERENCES	45

SUMMARY

This study involved the content analysis of all logged telephone calls to a Hartford, Connecticut drug hot line, operating with trained volunteers from 8:30 to midnight daily. The analysis covered two separate periods, totaling 7 months.

For each logged call, 4 items of information were coded: the day the call was made, source of call, sex of the caller, and content of call.

Findings indicated that the majority of the inquiries were from relatives and friends of users, and most of the calls were made by women. The most revealing of the data was the relationship between source and content of the call.

Earlier studies such as those by Pope, Yoshioka, Greenlick, and E. M. Rogers, were cited. Implications for the dissemination of drug abuse information were also discussed.

METHODOLOGY

From January 2, 1970, to April 5, 1970, and from November 1, 1971, until February 27, 1972, a total of 756 calls were logged at a Hartford, Connecticut drug hot line. The hot line was operated by trained volunteers from 8:30 to midnight daily. All calls not seeking information about drugs were excluded from the analysis, leaving a final number of 418 calls. A 50% sample was made to construct coding categories. All calls were categorized by the same person.

Four items of information were coded: the day the call was made, the source of the call, the sex of the caller, the content of the call.

Four categories of possible sources of a call were established: information seekers, users, relatives, or friends.

Seven categories of content were found: (1) pharmacological information, (2) treatment information, (3) legal queries, (4) emergency assistance, (5) handling others, (6) drugs found, and (7) general drug information.

FINDINGS

Most calls for drug abuse information were made on Tuesday and Saturday. Forty-two percent of the calls were made by relatives or friends. Most of the calls were placed by women, and most callers (64.3%) sought information on how to cope.

The relationship between sex and source of the call was significant; most women (39%) called as relatives of users and most men (37%) called as users. The majority of users calling (56%) were men. Calls about treatment, legal information, and emergency treatment tended to be made by men. Calls about pharmacological facts, coping information and general drug information tended to be primarily made by women. The most heuristic of the data seemed to be the relationship between source and content of the call.

CONCLUSIONS

In providing instantaneous instrumental information, the hot line performs a unique communications role. The popularity of phone hot lines may indicate the instability of, or lack of, useful information in the media.

Probably the most efficient use of the hotline is in combination with on-line computer terminals, whereby extensive data may be provided to any caller. Hot line communications may serve as a link with the drug milieu. The dimensions and ramifications of this technological interface with human communications systems needs careful study and definition.

The study suggested to the authors that dissemination of treatment-related information should probably be accomplished through some permanent medium available for hand reference. Mass media seem ideally suited to increase dissemination of utilitarian content.

McEwen, William J., and Wittbold, George H. Assessing the Persuasiveness of Drug Abuse Information. Drug Abuse Information Research Project Report No. 6. Storrs, Connecticut: University of Connecticut Communication Research Program. May, 1972. 11 pp.

DRUG	Not Specified
SAMPLE SIZE	114
SAMPLE TYPE	Students
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Connecticut
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	1972
NO. OF REFERENCES	12

SUMMARY

This study investigates the set of strategies presently being employed in television public service drug abuse advertising and addresses the area of affective response to televised drug related communications.

In an earlier study McEwen reported that four component dimensions of response appear to underlie viewer judgments. These dimensions of response, relevant persuasion, negative evaluation, creative stimulation, and hard sell, are measured in students' reactions to films which were taken from televised drug abuse commercials.

The results indicated that there were no overall significant differences, with the exception of the "Hard Sell" dimension. This study also suggested that perceptions of "Hard Sell" need not imply concurrent perceptions of Negative Evaluation, and that perceived effectiveness does not necessarily imply perceived relevance. The study does not pretend to be conclusive, and it is noted that further efforts in the field are needed.

METHODOLOGY

A self-administered questionnaire, consisting of 82 descriptive terms accompanied by five-interval rating scales, was presented to respondents. Five current drug abuse commercials, in color, ranging from 30 to 60 seconds in length, and representative of the entire field, were shown to 5 introductory communication courses at the University of Connecticut. These classes ranged in size from 17 to 27 students, totaling 114 students.

After being shown a film, each of the students filled out an anonymous questionnaire. Each student responded to one of the five films via 82 scales, however, only 22 of these scales were retained for the present analysis. Each of the 4 dimensions of viewer response was represented by 5 scales which loaded highly (above . 50) and purely (< . 40) on the dimension. The actual range of loading on a single factor was from . 54 to . 84.

FINDINGS

Results indicate that overall significant differences were obtained only with respect to the Hard Sell dimension of response ($0 < .05$). Approaching significant difference were results for the Creative Stimulation and Negative Evaluation factors ($p < .10$).

An examination of the selected comparisons tests indicated certain consistencies. The fourth commerical ("Bad Trip") was perceived as low in Creative Stimulation and Relevant Persuasion, and high in Hard Sell and Negative Evaluation. This, however, did not reflect an evaluation of the film as being low in Persuasiveness. The first commercial ("LSD Wonder Drug") was rated high in Persuasiveness and Effectiveness, relatively high in Creative Stimulation, and low in Negative Evaluation. These results indicate that significant differences ($p < .05$) were obtained with respect to each of the indices and factors employed.

The reliability indices estimated from analysis of variance data were also reported. Such indices were primarily a function of the sensitivity of an instrument. All estimated reliability coefficients above . 35, with the highest reliability (. 85) for the Hard Sell measure.

The reported reliability estimates are a summation of five separate perceptual scales, which represent the four major dimensions. Thus, the measure of reliability is underestimated.

CONCLUSIONS

The possibility of biasing factors systematically effecting group scores is significant, and hence the data cannot be taken to conclusively indicate a superiority of one sort of appeal over another. The fact that perceived effectiveness does not necessarily imply perceived relevance provides additional data implying the psychological, as well as the theoretical, independence of the proposed dimensions of response. Obtained responses serve to indicate the apparent independence of the factors.

Estimates of reliability reflect an instrument which may prove to be sensitive to differences in persuasive appeal. This study is not a sufficient test of measure reliability, but additional testing would seem to offer promise. Additional tests should further establish the sensitivity of the proposed instrument to differences in persuasive strategy.

Indices regarding the validity of the proposed factors are necessary. The task remains to establish the psychological reality of the factors. Respondent arousal rate could be measured when commercial stimuli is found to differ in perceived stimulation/novelty value. Correlation measures would thus provide information dealing with the correspondence of psychological and physiological data.

Hanneman, Gerhard J., and McEwen, William J. An Experimental Analysis of Reaction to Filmed Drug Abuse Information. Drug Abuse Information Research Project Report No. 8. Storrs, Connecticut: University of Connecticut Communication Research Program, June 1972. 16 pp.

DRUG	Multi-Drug
SAMPLE SIZE	60
SAMPLE TYPE	Students
AGE	Adults
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	University of Connecticut
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires; Laboratory/Examination
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	22

SUMMARY

The purpose of this study was to provide a preliminary examination of the relevant response factors associated with the processing of information received through a visual mass media. Specifically, the experiment sought the nature and extent of viewed response to "persuasive" information on drug abuse which would ultimately determine behavioral impact.

In formulating predictions of adopter or consumer reactions to innovations, the researchers combined informational and affective response measures as data input. Attention and arousal data were correlated with the surprise and novelty of the stimulus presented.

These experiments were based on the 1972 McEwen investigation of the relevant dimensions of perceptual response to televised drug abuse messages. McEwen proposed an examination of four basic factors comprising viewer perceptions: (1) relevant persuasion (factual, makes sense); (2) negative evaluation (worthless, overdone); (3) creative stimulation (unique, creative); (4) hard sell (disturbing, emotional).

This present study was designed as an exploratory investigation utilizing both objective (galvanic skin response) and subjective (perceptual evaluation) measures.

METHODOLOGY

Experiment No. 1 incorporated scalar measures and rankings of message generated uncertainty. Six judges reviewed five NIMH-produced commercials and selected the point of highest uncertainty in each. The commercials were then twice presented to an intact class of 30 students in an introductory communications course at the University of Connecticut.

During the first showing, each commercial was stopped at the point of previously-judged maximum uncertainty. Each subject was then asked to predict what would happen in the next scene.

The commercials employed were:

1. "L.S.D., the Wonder Drug" (60 sec, NIMH)
2. "Bill Cosby: Speed Kills" (30 sec, NIMH)
3. "The Truth About Marijuana" (60 sec, NIMH)
4. "Bad Trip" (60 sec, NIMH)
5. "Neighborhood Junkie" (30 sec, NIMH)

Questionnaires were administered after the showing of each commercial to determine the "potency" dimension of meaning: hard-soft; strong-weak; heavy-light; masculine-feminine; aggressive-non-aggressive; tenacious-yielding.

Experiment No. 2 was conducted with 30 volunteers from previously untested introductory communications students. Students were randomly assigned in groups of 4 to 7 and viewed one commercial message only in a living room-type setting. Subjects were informed about the required physiological measurement and attempts were made to put the subjects at ease. Electrodes were attached, base-line and during-viewing GSR measures were obtained. Subjects then completed the post-test rating instrument.

FINDINGS

Experiment No. 1 provided preliminary information regarding commercial performance. Comparative rating data suggested that Commercial No. 4 (Bad Trip) was seen as relatively powerful and unconventional. Commercial No. 2 (Bill Cosby) and No. 5 (Neighborhood Junkie) were rated as lower in potency. Rankings of the five messages further reinforced the lower predictability of No. 5 and the greater interest value in the more complex commercial No. 4. "Bad Trip" was perceived as highest in "hard sell", while the "Bill Cosby" commercial was seen as low in "hard sell."

Results of the physiological arousal measures indicated no significant difference in baseline scores among the groups. Two difference scores, calculated on the basis of the continually-recorded data were compared. Both difference score measures suggested the arousal generated by message No. 1 (L.S.D.) to have significantly exceeded that generated by either commercial No. 2 or No. 4.

CONCLUSIONS

Preliminary data from these two pilot studies supported earlier inquiry related to the sensitivity of the derived perceptual factors to message strategy differences. Data also suggested possible relationships between physiological indicants of attention and certain subjective measures of perceived informativeness and stimulation quality.

The desirability of high arousal remains a question. The perceived personal utility and relevance to the viewer are at least as crucial a determinant of communication-generated behavior.

Hanneman, Gerhard J., and McEwen, William J. Public Service Advertising and Social Problems: The Case of Drug Abuse Prevention. n.d. 12 pp. (13 references).

SUMMARY

Although various public and private agencies have sponsored mass information campaigns against drug use, no data on their effectiveness have been obtained. Target audience response to such campaigns has been studied by the Drug Information Research project at the University of Connecticut in 13 related studies on the spread and impact of drug use information. This paper examines Project findings relevant to audience response to persuasive anti-drug messages on television. The authors cite previous studies which suggest that television, a heavily used and believed communications medium, seems to have the potential at least to inform young non-users about the "harder" illicit drugs. A number of studies undertaken to assess the extent and effectiveness of televised public service advertising (PSA) are cited. Analysis of these studies shows that PSA is restricted both by quantity, time-scheduling and lack of effectiveness. The authors suggest that detailed research evidence can lead to improved media scheduling and improved message strategies.

STUDY A

METHODOLOGY

To determine the actual nature and extent of televised PSAs, all major television stations in Massachusetts, Connecticut and Rhode Island were observed by trained coders from sign-on to sign-off for 2 weeks in 1971

FINDINGS

Over 90% of anti-drug advertising was broadcast during other than prime time. Only general information was presented by 87% of the advertising. Forty-two percent of all advertising referred to harmful social and/or physical consequences. Only 18% of the messages were specifically directed at young people, and 67% of the messages were appeals by celebrities.

STUDY B

METHODOLOGY

To determine whether these findings were generalizable across different times and topic areas, a second study examined all PSAs on 9 channels in Hartford, Connecticut between June 24 and June 30, 1972. Broadcasters' log books, when available, were used as a check on the reliability of coder-recorded data.

FINDINGS

Only 2% of total air time was devoted to any sort of PSA (in contrast to 20% for commercial advertising). Drug abuse PSAs comprised 5% of the total PS time, while all kinds of social problems comprised less than 20% of total PSA time.

Over 80% of PSAs were broadcast at other than prime time. The "social problem" PSA had the worst exposure, shown mainly during late night talk shows, news shows, and early morning children's shows. Messages were not specifically youth-oriented. PSAs were assigned strictly on a time availability basis.

STUDY C

METHODOLOGY

Respondents in a 3-stage set of studies evaluated the applicability of certain audience-generated descriptor terms to a variety of anti-drug messages. A final sample of 207 college students, individually tested, responded to one of 5 alternative PSAs on each of 38 five-interval applicability scales. Factor analysis was applied, providing a form of data reduction that permitted a concise description of the major dimension that comprised a given set of responses.

FINDINGS

Three major factors underlay the students' perceptions of television anti-drug advertisements:

1. Relevant Information - the personal relevance of the message content.

2. Dynamic Creativity - the novelty and excitement of the manner of presentation.

3. Hard Sell - the extent to which the message was disturbing and emotional.

Commercial "effectiveness" or impact results from specific combinations of these 3 factors, not from any single factor. To determine the potential impact of a message, a variety of receiver responses must be assessed and predictions of audience response developed.

STUDY D

METHODOLOGY

The sensitivity of perceptual measures to alterations in message strategy was examined. Five 60-second color PSAs were viewed by individually tested college students. Between 39 and 47 students saw any given film. Responses were recorded on questionnaires made of commercial perceptual scales and drug evaluation scales. Analysis of variance tests were applied.

FINDINGS

All 3 basic factors found in Study C were sensitive to differences in PSA strategy. Analysis of variance yielded significant differences between the 5 PSAs on Relevant Information, Dynamic Creativity, and Hard Sell, with Hard Sell the single most discriminating factor. This was consistent with earlier findings. Regarding viewer evaluation of illicit drugs, the data did not indicate significantly differing perceptions of drugs from these single message exposures. Other studies have indicated that the potential for changing audience "images" exists, if the target audience can be further segmented. The data suggest that certain strategies are seen as more relevant by nonusers of drugs, while these were not the most effective for users. Such audience data would have diagnostic value in examining available strategies as well as in determining future ones.

CONCLUSIONS

Media and message strategies presently used are not in accord with available research findings. Media scheduling is random, neither concerned with reaching a target audience nor with achieving maximum effect. Since message strategies are untested, they seem to produce reactions in contradiction to stated goals.

The authors recommend a rigorously planned set of information-dissemination activities, where channel and message are directed to a specific audience with specific communication goals.

Kanter, Donald L., et al. Pharmaceutical Advertising and Youth. Coronado, California: Coronado Unified School District, 1970. 256 pp.

DRUG	Multi-Drug
SAMPLE SIZE	606
SAMPLE TYPE	Students
AGE	Adolescents
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Coronado, California
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	0

SUMMARY

The purpose of this study was to attempt to determine the nature of some of the salient, perceived environmental influences which may affect drug usage among youth. Special attention was given to the role advertising may play in influencing drug usage.

The study was divided into three phases, working with a sample of 5th, 7th, and 11th graders.

Implications for future study were discussed, as were suggestions for the advertising industry and the media.

METHODOLOGY

The purpose of the study was to attempt to determine some of the salient, perceived environmental influences which might affect drug usage among youth. Particular attention was given to the question of the role advertising might play in influencing drug usage.

There were three phases to this study. Phase 1 was a recall study wherein respondents were asked to recall advertisements they remembered in daily television and radio listening. The sample consisted of 376 5th, 7th, and 11th grade students.

Phase 2 was a multifaceted survey designed to elicit responses toward drugs and other hypothetically related factors. The sample was 606 5th, 7th, and 11th grade students.

Phase 3 was designed so that respondents were shown 6 advertisements, and their general receptivity to each was measured. The sample consisted of 606 5th, 7th, and 11th grade students.

The questionnaires were self-administered under the supervision of teachers.

The author felt that there were methodological limitations primarily caused by limited funds and limited time.

The sample was felt to be unusual because within the community half of the families are attached to the U.S. Navy. Also, Coronado is situated close to Tijuana, Mexico. The school system is unusual in that drug abuse education is carried on at a high level, thus the findings may not be applicable to other communities.

FINDINGS

There was no indication that pharmaceutical advertisements were easier to recall than other heavily advertised products.

Peer group influence and curiosity were given as the major reasons why young people try illegal drugs for the first time.

Advertising was not talked about frequently among students when it was compared to other environmental influences. Many students felt that other young people were potentially capable of being influenced by pharmaceutical advertising. The family was seen as the greatest relative influence on their attitudes toward legal and illegal drugs.

Students felt that advertising was a relatively strong influence upon their feelings toward medicine, but not toward marijuana or illegal drugs.

Fifth graders ranked television programs as a relatively strong influence upon their general feelings and knowledge of marijuana and illegal drugs. They were also more receptive to 6 pharmaceutical and cigarette advertisements than older students.

Users of marijuana and/or pep pills seemed to be less negative, more receptive to the 6 advertisements (especially cigarette advertisements), than were non-users.

CONCLUSIONS

Advertising, per se, seemed to have a relatively low level of general influence on students when compared to other factors. While advertising cannot be responsible for students' attitudes and beliefs, it was seen to be an agent which could be potentially influential particularly on the youngest students. On the other hand, an anti-drug advertising campaign might also be most effective on the youngest group.

The author felt that some pharmaceutical advertising functions as a reinforcing element in the complex of attitudes toward drugs among the young.

It was suggested that a definitive study might be undertaken to see how advertising interacts with family and school influences to predispose some students to become illegal drug users.

Further, it was suggested that the mass media review their codes as to time and place of exposure. Drug manufacturers might examine their promotional programs to see if they are being completely responsible.

Ianni, Francis A.J. Attitudes towards the relationship among stress-relief, advertising and youthful drug abuse in two recent field studies. In: Drug Use in America: Problem in Perspective. Technical Papers of the 2nd Report of the National Commission on Marijuana and Drug Abuse. Appendix, Vol. II. Washington, D.C.: U.S. Government Printing Office, 1973. pp. 612-623.

DRUG	Not Specified
SAMPLE SIZE	5085
SAMPLE TYPE	Not Specified
AGE	Children and adolescents, 7-18 years
SEX	Not Specified
ETHNICITY	Black and Puerto Rican
GEOGRAPHICAL AREA	New York: Central Harlem, East Harlem, Staten Island and Nassau County
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1970, 1972
NO. OF REFERENCES	1

SUMMARY

The author presents the findings of the two in-depth field research projects on attitudes towards causes of drug abuse, and their relation to current literature on advertising as a factor in drug abuse. The purpose was to uncover opinions on the causes of drug use; the information would be used to develop new approaches to preventing drug abuse. A survey of the literature on causes of drug abuse indicates that of 16 studies (mostly of student populations) all tried to present a "profile" of drug users but only one tried to assess the

effect that proprietary drug advertising has on illicit youthful drug use, and concluded that it was unrelated. Study I, conducted in 1970, involved 362 youngsters aged 7-18 in Central and East Harlem and Nassau County, N. Y. Study II, conducted in 1972, involved 4,723 adults in Central and East Harlem and Staten Island, N. Y. The data from both indicated that less than one-fourth of the respondents considered the stress-relief syndrome (the use of alcohol, tobacco, proprietary and prescription drugs and other patterned responses to the relief of stress) was related to drug use. Among those who did indicate the stress-relief syndrome as a causative factor, the media were the least frequently cited source of information, and advertising was the least frequently cited media form, (less than 1% response). Yet in both samples advertising was cited as the best means of reducing and controlling the problems of drug abuse.

METHODOLOGY

Both studies were based on tape-recorded interviews given by young (for Study I) and adult (for Study II) community residents who were trained as interviewers by professional anthropologists. Interviewers used a protocol of suggested questions, not a specific questionnaire. Each interview was coded and analyzed by the anthropologists to discover what causes were most frequently given by respondents, and the results tabulated. Tapes which included responses on the use of proprietary or prescription drugs, alcohol, and tobacco to relieve stress were further analyzed in order to explore the relationship between drug use and the advertising of drug products.

FINDINGS

In both studies 4 categories of causes encompassed most of the responses:

1. Twenty-six percent of the youth and 27% of the adults cited socio-economic factors such as poor housing, bad education, lack of jobs, alienation, frustration, anger, hate, lack of identity or self-respect, a "total system of despair."

2. Twenty-two percent of the youth and 30% of the adults cited curiosity and wanting to do the "in thing."

3. Twenty-seven percent of the youth and 20% of the adults cited the belief that drug abuse among Blacks and Puerto Ricans is condoned if not encouraged by the White establishment that seeks to control or even wipe out the newly insurgent minorities.

4. Twenty-four percent of the youth and 21% of the adults cited the stress-relief syndrome: the habit of turning to an escape system for relief from stress, such as alcohol, prescription drugs, tobacco, etc.

To focus on the relationship between drug abuse and the advertising of drug products, tapes mentioning stress-relief were analyzed and findings further tabulated as follows. Of the 171 tapes from youths who mentioned stress-relief, 49% considered it an important factor, 33% considered it unimportant and 18% were ambivalent. Sources of information encouraging youth to seek relief from stress were cited as parents (44%), other adults (14%), other youth (19%) and the media (only 9%). Of the 16 tapes which cited the media, 31% mentioned movies, 31% television, 18% newspapers and 13% radio. Only one respondent cited advertising.

Using the same 171 tapes data were tabulated concerning sources of information thought to be helpful in reducing or controlling drug abuse. The media were most frequently cited (25%), then kids (15%), medical personnel (12%), and teachers (11%).

From the 1,675 adult respondents who mentioned stress-relief, 41% considered it an important cause, 29% considered it unimportant, and 30% were ambivalent. Sources of information cited were "kids" (38%), "adults" (24%), schools (9%) and the media (12%). Of the 338 who cited the media, 41% mentioned television, 22% movies, 8% radio, 7% advertising and 6% newspaper. Of the 161 who referred either to television or advertising, 30% mentioned general programming, 25% news-broadcasts, and 17% advertising. Only 44 respondents out of the total sample of 4,723 (i.e., less than 1%), specifically mentioned advertising as a source of information on the stress-relief syndrome. Yet the sources that adults cited as most helpful to reduce or control drug abuse were the media (21%), parents (17%), and schools (16%). Of the 347 who cited the media, 21% cited advertising, 19% television and 16% radio.

CONCLUSIONS

The authors point out that only one-fourth of the respondents felt that the stress-relief syndrome was related in any way to drug abuse, and that the media, and particularly advertising were least often cited as sources of information. Despite this, respondents cited advertising as the best means to reduce or control drug abuse. Such responses are informative and can be used in the design of new programs and approaches to preventing drug abuse.

The author also stresses the importance of an awareness of the widespread belief in a nonresponsive or genocidal establishment when designing drug education-information programs.

Goldstein, Harris K., and Whitfield, Michael J. Effects of Electronic Media in Drug Abuse Education and Prevention. Prepared under contract to State of Florida Drug Abuse Program. Tallahassee, Florida, 1972.

SUMMARY

This study was conducted by the Florida State University Department of Social Work, Tallahassee Florida, under a contract from the Drug Abuse Program of the State of Florida. Personnel at the Drug Abuse Program had found that no ready reference work was available with guidelines as to how an electronic media drug education program should be carried out, nor was there sufficient empirical research in this area.

In this report findings and an annotated bibliography of approximately 100 references were presented from a review of the available literature from 1968 - 1972. This list includes both published and prepublished literature regarding the use of radio and television in drug abuse education. The findings were summarized and citations presented under headings suggested by McGuire (1969) as a vehicle for conceptualizing the subject matter: source, message, channel, receiver, and destination.

METHODOLOGY

During the literature search various indexes and abstract journals were consulted (Psychological Abstracts, Sociological Abstracts, and Readers' Guide) and selected journals were searched in detail (Public Opinion Quarterly, Audio Visual Communications Review, Journal of Broadcasting, and Speech Monographs). In solicitation of materials a questionnaire was also used in which the respondent was asked to list titles and sources for personal research, any information about other efforts in this area, and names and dates of workshops or institutes attended where pertinent material was presented. Institutions receiving the questionnaires were : (1) a sample of 203 four year colleges or universities selected from the 1970-1971 Education Directory -- Higher Education; (2) 170 four year institutions in New York, Texas, Massachusetts and Michigan; (3) drug abuse programs of individual states; and (4) schools of broadcasting selected from a list published in the Journal of Broadcasting. Out of approximately 2,470 questionnaires sent, a total of 29 useful replies were received. A computerized literature search was conducted by the National Clearinghouse for Drug Abuse Information from which a bibliography of 156 titles (with 8 considered

relevant) was produced. Other searches were conducted through: (1) Science Information Exchange (3 relevant research projects); (2) ERIC, FIVE and CIJE microfiche files (none pertinent); and (3) the office of the Drug Abuse Program of the State of Florida.

FINDINGS

Summaries were arranged under the headings: channel, source, message, receivers, and destination. Some of the findings, more briefly summarized included:

Channel -
- Younger children tended to believe TV ads more than older ones.
- Films on TV increased knowledge, but had little effect on attitude.
- TV is more effective than radio for transmission of information on a subject such as drug abuse education.
- TV can bring about changes in human behavior, but not in a one-to-one relationship.

Source -
- Most of these findings were concerned with credibility of the source.
- Attractiveness of the source is said to lead to attitude change via identification of the receiver with the source.
- Descriptive language employed by the mass media on attitudes about drug abuse is important.
- The source must be shown to be an individual who has had experience in relation to the subject being discussed.
- Source credibility is effected by its perception in the eyes of different groups in the population.

Message -
- One study showed that the content of message transmitted little information.
- A message variable receiving much attention was the fear appeal of the message.
- Physical characteristics of a radio program had a greater effect upon attention than did content variables.

Receivers -

- Drug abuse education should be considered as only one of many influences operating on persons who receive communications.
- An inverse relationship exists between the amount of education and television viewing time.
- There was more attitude change when there was a greater discrepancy between a person's initial position and the news information.

Destination -

- A person in whom dissonance had been aroused was more likely to seek information than a person exposed to a compatible communication.
- The media communication must be compelling, must direct the listener to an appropriate action, and the listener must feel capable of reaching the goal.

Primary sources for these findings are abstracted as part of this report and may be referred to for more complete information.

CONCLUSIONS

The authors conclude that the report brought together for the first time the areas of empirical research, theories, expert opinion, and anecdotal material on drug abuse education in electronic media.

Stuart, Richard B. "Teaching Facts About Drugs: Pushing or Preventing?" Unpublished paper. n.d., 28 pp.

DRUG	Multi-Drug
SAMPLE SIZE	935
SAMPLE TYPE	Students
AGE	Adolescents
SEX	55.5% Male, 44.5% Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Michigan
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	1971-1972
NO. OF REFERENCES	12

SUMMARY

A study was undertaken to measure the effects of drug education in 2 junior high schools in Michigan. Nine-hundred thirty-five 7th and 9th grade students were randomly assigned to experimental drug education or control groups. After a 10 session drug education program, neither format nor content factors were shown to influence the results of the program. Drug use tended to rise as a function of the combination of increased knowledge and reduced worry. Other untested factors were suggested as influences. Further research into drug education was suggested.

METHODOLOGY

Differing instructional patterns of drug education were investigated in 2 junior high schools in an upper-middle class suburban, university community. All data were collected during October, January and April of the 1971-1972 academic year.

The subjects were 935 junior high boys and girls of whom 63.5% served as experimental subjects and 36.5% served as controls. The classes afforded a representative cross section of the 7th and 9th grade students in the school. Classes were randomly assigned to either experimental or control conditions.

A single instrument measuring 3 clusters of factors provided the data for this investigation. The first portion asked for self-reporting of the present and past use of 7 classes of drugs: alcohol, soft hallucinogens, hard hallucinogens, stimulants, depressants, narcotics and solvents. The second portion of the instrument contained 14 items measuring worry about drugs, 5 measuring the span of drug-related deviance, and 5 items measuring drug-related alienation. The third portion measured the subjects' knowledge of the pharmacology, psychological effects and legal implications of drug use.

Drug education was offered one day a week in each experimental class for a period of ten weeks. During the first semester, 1/2 of the experimental classes were randomly assigned to either teacher - or student - led patterns of instruction. Data were analyzed using conventional statistical programs available through the MIDAS system of the Statistical Research Laboratory of the University of Michigan. Data are presented for only 3 classes of drugs: alcohol, marijuana and LSD. Due to low use, the remaining classes of drugs did not yield sufficient variance to permit an analysis of differences between groups.

FINDINGS

Classroom instruction led to a significant increase in the students' knowledge about drugs. Neither the format nor content appeared to influence the rate of knowledge acquisition. Student-led discussions offered little if any advantage over more conventional teacher-led programs.

High knowledge about drugs did not necessarily lead to low worry, and low worry did not lead to high drug use. Only among LSD users did worry and knowledge covary. Level of knowledge alone is insufficient for predicting use. Use can be predicted from an interaction between low worry and high knowledge. High worry-high knowledge was not predictive of use.

The alienation scale yielded no significant F ratio differences.

At pre-test, 7th graders had less information about drugs than 9th graders; experimental subjects at both grade levels had more drug knowledge than controls at similar levels.

Relative to controls, subjects who received drug education significantly increased their knowledge about drugs, their use of alcohol, marijuana and LSD, and their sale of the latter two drugs, while their worry about drugs decreased.

CONCLUSIONS

The author reached three principal conclusions after noting seven caveats:

1) It should be borne in mind that the data were drawn from anonymous questionnaires and were wholly self-reports.
2) The results may not generalize beyond the specific population studied.
3) Some of the observed differences between the experimental and control groups may be due to the collection of data by the teachers who presented the drug education material. Students in the experimental group were familiar with the teachers and may have been more honest in their responses.
4) The research did not assess use patterns for amphetamines, barbiturates or narcotics due to low student usage.
5) The subjects were slight users: 1-2 times a month for alcohol, 1-2 times a year for marijuana and LSD.
6) The follow-up period of four months was very brief.
7) Results cannot be generalized.

It was concluded that drug education may not only impede the use of drugs, but may actually exacerbate drug use. Classroom instruction can lead to a significant increase in the level of students' knowledge about drugs. The association between drug education and drug use may not be a simple one; other factors may also be influential. Drug education alone should not be expected to reverse the impact of multiple determinants of drug use.

Special attention should be given to drug education research to answer critical questions about the efficacy of drug education.

The findings support the suggestion that drug education may not necessarily be positive in its effect. A need for precise measurement of program outcomes is indicated.

National Coordinating Council on Drug Education. Drug Abuse Films. 3rd ed. Washington, D.C.: The Council, n.d. 119 pp.

DRUG	Multi-Drug
SAMPLE SIZE	192 Films and AV Media
SAMPLE TYPE	Films and AV Media
AGE	N/A
SEX	N/A
ETHNICITY	N/A
GEOGRAPHICAL AREA	N/A
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Observations Questionnaires
DATE(S) CONDUCTED	1970-1972
NO. OF REFERENCES	0

SUMMARY

This evaluation report by the National Coordinating Council on Drug Education deals with 192 films and audio-visuals which were viewed and discussed by two panels between 1970 and 1972. Scientific correctness and conceptual accuracy were the two main criteria used.

The NCCDE was disappointed in the quality of the material. Only 16% were judged "acceptable." Most of the films and audio-visual material were found to portray preconceived opinions rather than factual information designed to inspire people to develop their own attitudes.

Each review listed basic usage data (price, running time, etc.), plus a synopsis and evaluation. Guidelines were offered for the selection and use of drug education material.

METHODOLOGY

The review process was built upon the premise that an "ideal film" is scientifically correct and conceptually accurate.

Two panels were used. The primary concern of the first panel was accuracy of information content. People with knowledge about drugs and human behavior were selected from fields of medicine, psycho-pharmacology, pharmacy, and the social sciences. The second panel was concerned with the effectiveness of the films as communication tools. Members of this group included film experts, writers, teachers, individuals involved in drug programs, and students. A standard questionnaire was used, a sample of which appears in the report.

The 192 films evaluated were divided into four categories: Recommended, Restricted, Unacceptable, and Aimed at Minority Groups. Each review included the following information: medium, year, intended audience, producer, source, rental fee, purchase fee, details (such as running time and color process), and date reviewed. A synopsis and evaluation followed. The evaluation often included a dissenting minority opinion, so that more than one point of view could be expressed. Scientific accuracy and communicative effectiveness were stressed throughout.

FINDINGS

All of the material was found wanting, to some degree. Thirty-one percent were classified as "unacceptable" because of inaccuracies and distortions. Fifty-three percent of the films were placed in a "restricted" category, meaning that they require special care in public presentations. Only 16% were found to be at least scientifically and conceptually accurate. All of the films developed for minority groups were found to reinforce existing stereotypes and invalid generalizations.

CONCLUSIONS

The reviewers recommended to future film makers the avoidance of a set of assumptions, formats and techniques:

1. The most common error made was stating that a particular drug <u>always</u> causes, or <u>never</u> causes, a certain specific reaction. NCCDE recommends that future films stress that a complex set of variables is involved.

2. Many films blamed the drugs themselves for drug-related problems, instead of pointing out the influence of non-drug factors. NCCDE recommends that non-drug factors, such as legislative or economic matters, be pointed out.

3. Some films advocated a particular rehabilitation model of public law policy which would "solve" the problem. NCCDE recommends that films convey the message that there is a need for a multi-modality approach to treatment, as well as institutional and social reform, to prevent a user from backsliding.

4. The council deplores the perpetuation of the myth that only illegal drugs are misused.

5. It is recommended that films not support the misconception that only young people misuse drugs.

6. It is recommended that drugs be classified accurately so as not to ascribe erroneous properties and effects to a particular drug.

7. It is recommended that films use appropriate settings, film techniques, graphics, and formats so as to avoid reinforcing inappropriate generalizations and stereotypes about drugs.

The Council emphasized that a drug abuse film should never be used without discussion.

Woodcock, Jasper. Action in the schools. In: Richard Blum and Associates. Drug Dealers -- Taking Action. San Francisco, Calif.: Jossey-Bass, Inc., 1973. pp. 267-281.

SUMMARY

The question of the efficacy and nature of education on drug use and drug dealing is considered.

Once the decision has been made to introduce education there has been the risk of bureaucratization in the program. This tendency involves heavy use of experts, teaching aids and an increasing appropriation of funds.

Several approaches are critiqued. (1) The health approach, the most common, focuses on drug education as a health problem. This approach assumes that drug use produces ill health and so makes the approach questionable. Earlier studies have shown that supplying information does not always produce the desired effect.

(2) The delinquency approach focuses on the relationship between drugs and the law in drug education. Past studies in which socially disadvantaged children received extra vocational and counseling help have proved useless. The author questions the efficacy of such an approach.

(3) Another approach focuses on controlling abnormal uses of drugs, or controlling the use of dangerous or unusual drugs among children for whom some drug use is statistically normal. No evidence as yet exists to support the effectiveness of this type of program. An experimental design in use in San Mateo county schools involves give and take or group dynamics within the classroom. This approach is still in the process of being evaluated.

(4) One thesis put forth by Weil (1972) purports that altered states of consciousness constitute a natural biological and spiritual phenomena. This approach would condone and actively teach children ways in which to reach such altered states. Prototypes for such programs already exist in spiritual and "hippie" communities. Suitable controls and supports for such a program are hoped for.

Drug education is seen, at least in part, as a moral endeavor. The moral stance taken varies with the cultural context and with the religious orientation of both school and community.

Once a youngster is identified as a drug user, the schools might supplement information with case finding or referral. This approach implies specification of goals in drug education by drug, by individuals, by developmental status, and by the community. It also assumes knowledge about the relative efficacy of one or another form of intervention to be applied.

The extent of drug education has tended to be inversely related to the degree of evaluation. If evaluation found drug education to be worthless, the evaluators would be dismissed and their methods ridiculed. The drug education would continue, however. Evaluation should be seen as an integral component of drug education rather than as a one-shot alien process. It must be an integral part of the education program. Insights from such evaluation would assist in refining and clarifying goals.

The author concludes with a clear statement of the need for further evaluation in the field of drug education. The dilemma of the direction of such evaluation has yet to be resolved.

Wald, Patricia, and Abrams, Annette. Drug education. In: The Drug Abuse Survey Project. Dealing with Drug Abuse. A Report to the Ford Foundation. New York: Praeger Publishers, 1972. pp. 123-172. (47 references)

SUMMARY

Drug education has been undertaken by a variety of agencies and individuals both within and outside the school situation. This article discusses and evaluates the varying approaches to drug education with emphasis on the impact and direction of the mass media, and the more recent attempts on the part of the business community to deal with the problems of drugs.

The first task of a drug-abuse-prevention program is to define the goals sought. This is a major problem. It has been difficult to establish goals that are realistic and desirable, and most proponents of major efforts cannot agree on what they hope to accomplish. Methodology is in question since it is not known whether an exclusively factual approach to young people works or whether an attempt to control behavior by propaganda and punishment works.

Studies are cited which indicate that a goal of total cessation of all drug experimentation on the part of young people is not a realistic goal. A goal oriented toward factual awareness, rather than propaganda or punishment, is discussed. Results of approaches using this goal with older students are summarized. What is not known is how such an approach works with young children.

Articulation of objectives is called for before any educational effort can be deemed a success or failure.

Drug education for students remains an area in which little is known. Long-range follow-up and evaluation are rarely performed and what work has been done has yet to be pulled together and collected in one place. The authors discuss the immediate goals necessary for these programs to be successful and the various kinds of personnel who might be involved, e.g., regular teachers, ex-addicts, medical doctors, students themselves. The authors decry the absence of evaluation of on-going programs; without such evaluation, they state, no more will be known about the best way to educate about drug abuse.

While it is felt that in-school counselors can be very helpful, a need is seen for the support and cooperation of outside community elements.

Five non-school prevention programs were categorized: (1) peer-group programs, (2) free clinics and crisis centers, (3) hot-line telephone services, (4) afterschool and instead-of-school prevention programs, and (5) drugmobiles. These are all seen as helpful but limited.

In discussing the influence of the mass-media on drug-abuse prevention, the authors state that the effectiveness of such efforts depends on specific goals and methods used to obtain such objectives. A review is done of some of the present efforts, including television campaigns, radio and TV antidrug spot ads. Radio stations have used rock songs to communicate anti-drug messages. Television's steady advertising of over-the-counter drugs has been seen as contributing negatively to the drug problem.

Drug films and audio-visual materials have become a popular teaching device. The problem, however, for any school or civic group is how to distinguish between effective material and that which is inaccurate or counterproductive. There is a need for evaluation of materials. More youth participation must be encouraged in the development and evaluation of such films.

Live videotape of student discussion is seen as very valuable, although the equipment is generally too expensive for school budgets.

There has been a recent emergence of packaged anti-drug curricula which vary tremendously in quality, content, and approach. Such publications as the NIMH Resource Book for Drug Abuse Education and Teaching About Drugs both contain excellent materials. However, since no provision is made for evaluation, the authors found it difficult to make comparisons of these and other materials.

The needs that parents have in relation to a family drug crisis are discussed. They are often lacking accurate information and generally are in need of sympathy and counseling as well as facts.

The Federal government's attempts to deal with drug-abuse have been uncoordinated, piecemeal and inefficient. Although millions of dollars have been spent, it is not known how effectively these funds are being used.

A major problem at the state level is lack of effective coordination. There is often unnecessary overlap and duplication of effort with no clear-cut policies or leadership.

There has been little evaluation of private efforts, and most of them appear to be limited and local in scope. The authors found the National Coordinating Council on Drug Education to be the most inclusive.

Recently business and industry have had to deal with the problems of drug abuse. While they have instituted educational programs, there is a need for more experimental work to better plan for these programs.

The authors concluded that additional money is not the most urgent requirement to improve the status of drug-abuse education. What is needed is evaluation, so that current research findings can be translated into action. Educational programming must respond to differences among addicts in ethnicity, age, and mental set. Creative

individuals are needed as catalysts. Concerted efforts to clarify goals, drug knowledge, and institutional responsibilities are essential.

National Research Council. Evaluating Drug Information Programs. Washington, D.C.: The Council, July 1973. 111 pp. (PB 226 607).

SUMMARY

Four tasks were originally assigned to the Panel on the Impact of Information on Drug Use and Misuse, established by the National Academy of Sciences, and under the auspices of the Division of Behavioral Sciences of the National Research Council in 1971:

1. To determine whether it is feasible, in terms of methodology and estimated costs and benefits, to conduct impact studies on current information programs designed to affect behavior with respect to the use and misuse of drugs;

2. To advise NIMH on the research design for one or more studies found to be feasible, should this be the case;

3. To assist NIMH, if requested, in identifying qualified performers of such impact research, in monitoring its conduct, and assessing its results; and

4. To identify opportunities for, and provide advice on, the research design of evaluation studies on prospective information programs which focused on drug use and misuse.

Phase I

The Panel was set the task of determining whether it would be feasible in terms of methodology and estimated costs and benefits, to conduct impact studies on current information programs designed to affect behavior with respect to the use and misuse of drugs. It first focused on current mass media campaigns, e.g., radio and television spots, posters and print ads carrying messages on drug use. The cost of creative work and exposure time were given by the Advertising Council. NIMH staff identified five target groups at whom material was directed: adult, youth, drug fact seekers, school children, and students abroad. However, program directors were not able to state clearly their goals, characteristics of the target groups, nor procedures that would safeguard against counter productive effects. Nor did the agency have controls of, or accountability for the numbers or locations of exposures, since spot announcements, posters, etc., were exposed on donated time.

X

Such factors complicated the task of evaluation, already confused by the many competing and complementary drug information programs at all levels of government and community organization. It seemed very unlikely that the behavioral and other effects of any one program, e.g., one sponsored by NIMH, could be isolated.

Despite these limiting conditions, the Panel found 5 types of evaluation studies to be technically feasible:

1. Inference of goal attainment
2. Description of target groups and message content
3. Measurement of current knowledge and value levels
4. Estimate of media accessibility in different populations
5. Quasi-prospective studies.

Cost estimates were provided for each. Judgments of benefit depended mainly on the basis of applicability for future programming.

The Panel recommended the implementation of 2 studies, for the evaluation of current programs:

1. Quasi-Prospective Study I: Field testing. For use as bench marks in future compaigns, various print and broadcast materials from drug, safety and other public service campaigns should be collected and tested for comprehensibility, interest and aesthetic appeal among fairly small samples of target audiences.

2. Quasi-Prospective Study II: Explicit goal setting and judgments of effectiveness. Directors of communication programs would form one panel in goal setting, target group description, pre-testing techniques, post hoc measurement, and provision for experimental procedures, while a parallel, independent consumer panel would judge effectiveness of the program in meeting goals.

The report concluded by identifying issues for a second report, such as in-house evaluation capability, contract mechanisms for evaluation research, and program goal setting.

Phase II

The panel originally planned to provide advice on drug information programs in the early stages of implementation and those yet to be planned. This was prevented, during 1972-1973 by a 6-month moritorium on production of drug use information materials. The report therefore describes the use of evaluation research in the development of a hypothetical drug use program.

The panel recommends the application of the research procedures described, not the program content. It defends the value of using a hypothetical study. This can provide a means to identify institutional structure and even suggest innovations that can strengthen the evaluative capabilities of an institution.

The scenario presents a hypothetical community applying for assistance in developing a drug information program, and the imagined response of NIMH on a national, regional and local level: establishing guidelines, translating these to apply to local realities, developing alternative options (programs) directed at various target groups. The lengthy and detailed scenario is fashioned to show how evaluative activities could be used in such an area of high public concern, and the Panel emphasizes 4 lessons for evaluative efforts that could be drawn from it:

1. Appropriately trained professional personnel must be used as staff. Their recruitment should be timed to ensure their availability when the project is started.

2. The goals of the program must be successively refined until they can be stated in unambiguous behavioral terms.

3. At several stages in the design and evaluation of a program, independent advice should be sought from disinterested experts.

4. The requirements of vigorous experimental research should apply also to evaluation research.

Abrams, L. Annette; Garfield, Emily F.; Swisher, John D., eds. Accountability in Drug Education. A Model for Evaluation. Washington, D.C.: The Drug Abuse Council, Inc., 1973. 168pp. (152 references).

SUMMARY

A drug education handbook for educational administrators, researchers and drug educators, this text was commissioned by the Drug Abuse Council in response to the mounting complexities surrounding drug education goals and outcomes and the need for reliable research guidelines for schools and agencies.

Public awareness of youthful drug use began in 1967, resulting in millions of dollars for school prevention programs, primarily focusing on cognitive aspects. The assumption was that if people were educated about the risks of drug taking they would not take drugs.

In the late 1960's studies began to show that the more students knew about drugs, the more likely they were to hold favorable attitudes. School prevention programs then began to emphasize group processes, peer group sessions, and the use of credible resource people, in response to evaluation and program effectiveness studies which showed that students acquired more cautious attitudes about drug use as well as information with these techniques.

The handbook is based on the assumption that further progress toward better drug education requires a clearer understanding of the evaluative process. Questions addressed in the manual include evaluation management, the use of basic experimental designs in evaluation, optional test instruments and their use, student involvement in research, and the utilization of new knowledge in planning more effective drug programs.

The major sections of the handbook are : (1) Decision Making in Research, 5 chapters discussing primary areas of concern for those planning evaluation; (2) Measures for Drug Education, containing a series of reliable measures for drug education programs and suggestions for locating additional measures; and (3) Analysis and Interpretation of Data, addressing the final stages of research planning.

Chow, Stanley; Ertle, Vicki; Keyes, David. Drug Education. PREP Report No. 36. DHEW Pub. No. (OE) 72-9. Washington, D.C.: U.S. Government Printing Office. 1972. 81 pp.

SUMMARY

This report is intended primarily for use by the school official responsible for initiating or improving a drug education program. Some of the sections will be of interest to anyone concerned with preventative drug abuse programs. No effort is made to deal with rehabilitation and treatment. The focus here is on what schools can do and are doing to prevent the abuse of drugs by students.

The findings of a year-long study of drug education in the United States are summarized, with a subjective analysis of the various approaches in the field, based on fact-finding trips to the programs studied. There appear to be four major groups of drug educators: the Shotgunners, the Comprehensive Pharmacologists, the Values Trainers, and the Mixers. The Shotgunners favor a "hypodermic" approach, a small injection here and there, rather than carefully planning a curriculum or comprehensive program that would help students deal effectively with pressure to take drugs. The Comprehensive Pharmacologists develop exhaustive curriculums designed to impart hard information. There is little evidence to confirm the presumption that information modifies behavior and there is reason to suspect a drug education program based on pharmacology may encourage the use of drugs if material is not factual and complete. The Values Trainers have turned to a humanization of their schools, implementing programs designed to develop values and decision-making skills among students. The Mixers try to blend various approaches and are also likely to be ex-advocates of some more limited approach. The latter two groups appear to be far ahead of the former in effectiveness, but such a statement cannot be made with certainty because meaningful instruments for evaluation have not yet surfaced in the field. The point is made that drug education programs are often hastily conceived as a result of panic and pressure, rather than carefully planned and systematically executed. Commercial programs alone accomplish little; if used, they should be used as part of a comprehensive, locally developed project.

The "Guide for the Drug Education Planner," directed to program planners, offers specific guidelines for planning, implementing, and evaluating local drug education efforts and should serve as a working tool in the development of a project tailored to a school district's special needs.

Detailed descriptions of 10 different approaches to drug education are presented. Each case study traces the program from its inception to its current state, describing philosophy, curriculum materials,

and student and community reaction. These studies should be of special interest to curriculum coordinators and other administrators.

Coronado, Calif.: Example of a program in a small western city which has evolved from a pharmacological approach to a value training program.

State of Oregon Services Program: Example of state-coordinated efforts to assist school districts in dealing with drug-related problems.

Duluth, Minn.: Example of an effective teacher training program that is highly transportable, in use in a progressive, medium-sized school district.

Milwaukee, Wis.: Example of a computerized program especially suitable for use with urban students.

Wayne County, Mich.: Example of a highly successful training program, unique and transportable. Suitable for large, centralized school districts.

Seymour, Conn.: Example of a student-oriented program, emphasizing values development and small group techniques in a small northeastern town.

Dade County, Fl.: Example of evolution of a large-scale teacher training program in a large school district.

Maricopa County, Ariz.: Example of teen counselor-oriented program tempered by humanizing influences.

Parkway, Mo.: Example of evolution of program from factual, pharmacological approach to values training in a suburban setting.

Laredo, Tex.: Example of outstanding curriculum guide and of program adapted to a specific geographic region.

Descriptions of six commercially developed products are presented to provide the school district representative responsible for recommending purchase of materials with enough information to decide whether or not to preview the program described. The products should be considered as supplements which may prove useful as component parts of a comprehensive local approach. Distributors and materials prices are included.

The Creative Learning Group Drug Education Program. Grade level: K-6 and 7-9; Content focus: the causes and consequences of misusing drugs, with emphasis on personality development. Program use: considered by developers as a complete drug education program; may be used as a supplement in total drug education efforts. Students using the materials during spring 1971 completed evaluation forms; responses from more than a third were favorable. Ninety-one percent of the junior high school students in one district sampled responded that they thought the materials were interesting, easy to follow, and stimulating. No evaluation has been conducted on elementary materials.

Drug Education Program or Drug Abuse Decision System (DADS) (Also known as the San Mateo Drug Education Program). Grade level: grades 9-12; reading level: grades 6 and 7. Content focus: pharmacology. Program use: considered by developers as a complete drug education program; may be used as a supplement in total drug education efforts. The San Mateo School District is collecting data on the influence of the DADS program within the district; data is also being collected on the 60-item pretest and posttest used to check student knowledge about drugs.

The Drug Experience: Data for Decisionmaking. Grade level: grades 7 and 8; has also been used in grades 6 through 12. Content focus: pharmacology. Program use: considered by developer as a complete drug education program; may be used as a supplement in total drug education efforts. During its development state the program was tested by schools, church groups, adult education classes, and families in Philadelphia and the Boston area. A total of 400 subjects reviewed the program materials. No formal report of this evaluation was prepared.

Drugs: Insights and Illusions. Grade level: all junior and senior high school students, but especially those who read at 4th to 6th grade levels or who are otherwise poorly motivated by conventional classroom materials and techniques. Content focus: the causes, consequences, and alternatives of drug use and abuse. Program use: can be used either as a drug unit lasting from 8 to 16 weeks or integrated into the regular curriculum for a semester or a school year. No pretests or posttests are provided with the program materials to evaluate the program.

Technicon Drug Decision Program. Grade level: grades 6-9. Content focus: main emphasis is on pharmacology and decision-making; does not include alcohol. Program use: considered by developers as a complete drug education curriculum; may be used as a supplement in total drug education efforts. Pre- and post-knowledge tests are supplied. The Technicon staff hesitates to quote evaluation data because, they say, many of the early testing instruments were insufficient and testing procedures unsophisticated. Most of the users report that the program has increased student knowledge about drugs and their effects.

Impact Plus Two and Why? Grade level: Impact Plus Two, grades 5 and 6; Why?, grades 7 and 8. Content focus: Impact Plus Two: amphetamines, barbiturates, marijuana, and volatile substances; Why?: stimulants, depressants, hallucinogens, volatiles and causes of abuse. Program use: considered by developers as a complete drug education curriculum; may be used as a supplement in total drug education efforts. In the

spring of 1970 an evaluation of Impact Plus Two was conducted at Ponolita Junior High School in the Ukiah (Calif.) Unified School District; 650 students in the 7th and 8th grades plus 25 teachers were surveyed by questionnaires. As a result of the evaluation, it was suggested a program be designed specifically for junior high students in the Ukiah schools. Why? was subsequently developed, is now in use, and evaluation data is being collected. It was recommended that available human resource people such as ex-users be included, and that a segment of the program be concerned with helping students already involved in drug use, rather than just concentrating on prevention. Other California school districts using the Impact Plus Two materials have administered pre- and posttest and report knowledge gains.

Cornacchia, Harold J.; Bentel, David J.; and Smith, David E. Drugs in the Classroom. A Conceptual Model for School Programs. Saint Louis: C.V. Mosby Company, 1973. 329 pp. (394 references).

SUMMARY

This book focuses on the preventive aspects of the drug problem for grades kindergarten through 12th. The behavioral approach is emphasized. The book is intended to provide direction and assistance to a variety of school and community individuals. The authors have organized information from a variety of sources to provide functional solutions. Guidelines are offered for establishing school drug programs. Material is included for teachers, nurses, counselors, administrators, and curriculum directors.

Part I introduces the reader to the drug problems faced by schools. Part II deals with society and drugs, bringing together pharmacological, psychological, and sociological information on drugs, rehabilitation and treatment resources, and the law and law enforcement procedures. Charts are included, depicting disease and death rates associated with cigarette smoking; lists of drugs by brand name, generic name, slang name, dose and duration of action of the drug. Part III presents a conceptual model of the school drug program, including drug education, drug services to identify drug abusers, procedures for helping these students, techniques for providing the appropriate humanistic school environment and coordination of the school drug program. Over 400 teaching techniques are included as well as lists of films and filmstrips recommended for use by the National Coordinating Council on Drug Education. Part V provides evaluation guidelines and suggestions for use by teachers, administrators, and others. Included in this section are a collection of questionnaires dealing with drugs, alcohol and tobacco, to be used with a variety of grade levels as a method of gathering data on attitudes, information and opinions of school children. Evaluation forms for curriculum materials are provided.

Macro Systems, Inc. Evaluation of Drug Education Programs, Volume I. Prepared for the Department of Health, Education and Welfare. Silver Spring, Maryland: Macro Systems, Inc., June 1972. 76 pp.

Volume I.	Main Report
Volume II.	Current Status and Catalog of DHEW Drug Education and Training Programs and Materials
Volume III.	Detailed Summary of Project Methodology and Survey Instruments
Volume IV.	In-Depth Study of Drug-Use in Six Communities

SUMMARY

Volume I is the main report of a study commissioned by the Office of the Assistant Secretary for Planning and Evaluation, Department of Health, Education and Welfare to appraise present drug education programs at the community and national levels and to determine their effectiveness and acceptance on the part of youth and transmitter groups. Recommendations were to be made to DHEW.

To achieve the objectives of the study the following tasks were carried out:

(1) Cataloged current DHEW-supported drug education programs and materials

(2) Assessed the scientific validity and sophistication of DHEW drug education programs

(3) Determined the impact of drug education programs in six selected cities: Richmond, Minneapolis, East Harlem, San Diego, Chicago, and Lubbock, Texas.

(4) Surveyed the attitudes of a national sample of drug education transmitters regarding drug use and the quality of drug education programming.

The study team made recommendations to DHEW in the five categories summarized below:

- DHEW impact on youth target populations
- DHEW involvement with drug education transmitters
- DHEW drug education, technical assistance and research
- DHEW drug education information and materials
- DHEW overall management organization of drug education programs.

These recommendations were made on the basis of supportive data gathered during the study.

METHODOLOGY

The methods employed in this study, described in Volume III of the full report, are not abstracted here.

FINDINGS

Current DHEW-Supported Drug Education Programs and Materials

During FY 1972 over $380 million was appropriated to 15 Federal agencies to support a variety of drug education programs. DHEW spent over $155 million for drug programming in FY 1972, primarily through the National Institute of Mental Health and the Office of Education. Detailed summaries of DHEW-supported drug education and training projects are contained in Volume I of this report. Volume II contains an alphabetical inventory of NIMH and OE drug education projects and materials, including project title, project director, mailing address, Federal project number, enabling legislation, amount of allocated resources and brief description of project objectives.

Scientific Validity and Sophistication of DHEW Drug Education Programs

The assessment approach involved an examination of the decision-making process in a representative number of DHEW drug education projects. Data are based on direct interview contact and evaluation of 8 projects. Information materials were assessed within the context of the projects using them; these included 11 printed items and 4 films.

Forty-three criteria were formulated relative to the 4 program stages of problem diagnosis, planning, preparation, and implementation, and a carefully constructed set of numerical ratings was established for each criterion. Accordingly, the numerical score for each criterion and program stage ranged from a possible minimum of 0.00 to a maximum of 2.00. The total average score for all stages was 1.23.

Data analysis showed that project sophistication improved as it progressed through the sequence of developmental stages. The most salient problem during the early stages of program development was the failure to seek technical assistance when community experience was lacking. An effective literature search on the drug problem and/or drug using population was generally neglected. There was a lack of involvement of target groups, transmitter groups and various staff during the planning process. There was a significant neglect in developing priorities among program objectives during the planning phase. There was little evidence shown that materials produced and disseminated by DHEW were being widely or effectively used.

Impact of Drug Education Programs in Six Selected Cities

Detailed findings from this in-depth study are contained in Volume IV of the report. It was recommended that DHEW establish guidelines for the selection of drug education transmitters, based on the following data. Over half of the youths interviewed (52.2 percent) stated that former drug users or addicts were the most effective people to present drug education. Least effective presenters were clergy or police, parents and teachers.

The survey data also showed that transmitters' perceptions about reasons for use, perceived dangers, and types of drugs used were at considerable variance from youth responses. Marijuana was defined as a drug of abuse by 64 percent of the transmitters and 43.8 percent of the youth. In this group of respondents, 44 percent of the transmitters and 32 percent of the youth reasoned that marijuana was addictive or led to addictive drugs. Marijuana was seen as having no harmful side effects by 17.7 percent of the youth and 8 percent of the transmitters.

The recommendation was made that DHEW recruit more transmitters of Spanish origin, based on the following data. Almost 25 percent of the youth were of Mexican-American or Puerto Rican heritage, while only 3.6 percent of the transmitters were Mexican-American and none were Puerto Rican.

Respondents were asked to state their perceptions about the impact of drug education in preventing drug use. About one-fourth of the youth (24.8 percent) and one-third of the transmitters (31.5 percent) felt that education did stop people from using drugs; education was seen as ineffective in stopping people from using drugs by 75.2 percent of the youth and 68.5 percent of the transmitters.

In regard to the accomplishments of drug education programs, 62.9 percent of the youth and 54.8 percent of the transmitters viewed these programs positively (they provided facts and allowed personal decision-making about drug use). Negative program accomplishments included failure to deal with the community drug problem and scare tactics or one-sided information.

It was evident that drug-using and non-drug-using youth differed considerably in their attitudes toward drug use and related issues. The majority of youth who did not use drugs felt that all drugs were dangerous while drug-using youth stated that not all drugs were dangerous. Drug-using youth did not perceive marijuana smoking as drug abuse and saw alcohol as more dangerous than marijuana. Non-drug-using youth were concerned about the control and illegality of drugs and expressed fear for their drug-using friends in terms of legal consequences and dangers to health. It was recommended that DHEW develop distinct approaches to drug education for two basic youth populations: drug-using and non-drug-using.

Youth were asked which drug education techniques and materials were most effective with youth. The results indicated that rap sessions and encounter groups were most effective (38.7 percent); seminars and lectures (6.8 percent), TV programs (6.7 percent) and hot-lines (7.9 percent) were less effective. Posters were seen as most effective by 18.4 percent of the youth and films by 9.8 percent.

When asked which measures would be most effective in solving the drug problem, 33.1 percent of the youth selected improved drug education efforts and 25.9 percent selected improved communications between youth, parents and schools. Other measures selected were increased legal penalties (12.6 percent), increased availability of treatment programs (13.7 percent) and legalization of all drugs (5.4 percent).

Slightly over 80 percent of the youth felt that the Government should be involved in drug education because it has the responsibility and resources.

When asked which community source would be contacted for further drug information, 25.2 percent of the youth stated they would go to a drug treatment and rehabilitation program, 9.5 percent to a drug education program, 18.8 percent to a health facility or clinic, 13.5 percent to drug-users or addicts, 11 percent to books, and 13.6 percent would not know where to go.

Youth felt they had received the most drug information from friends (30.7 percent) and the least from clergy or police (1.3 percent).

Reasons for drug use were given by youth as follows: fun, kicks or pleasure (55.8 percent); escape from unpleasant realities (10.8 percent); inner self-exploration, experimentation or curiosity (18 percent).

CONCLUSIONS

Based on analysis of all the data, the study conclusions were presented in the form of recommendations to DHEW in five areas, as detailed below.

1. Recommendations on DHEW impact on youth target population.
   a. Drug education programs should reflect more clearly the diversity within youth target populations.
   b. DHEW should approach the drug problem as part of a youth lifestyle rather than as a separate issue.
   c. Overall objectives should focus on methods enhancing the development of decision-making and problem-solving capabilities among youth.
   d. Representatives of varied youth groups should be involved in the planning and development of drug information materials and programs.

e. Distinct approaches to drug education should be developed for two basic youth populations: drug-using and non-drug-using.

f. DHEW should expand its efforts to reach and assist young multi-drug users.

g. DHEW should expand its support of intervention programs serving youths 14 to 18 years of age.

h. Rap sessions and encounter groups should be encouraged in drug education programs.

2. Recommendations on DHEW involvement with drug education transmitters.

a. Guidelines should be established for the selection of appropriate transmitters.

b. DHEW should strengthen its capability to train transmitters.

c. Representatives of transmitter groups should be involved in the planning and development of drug information materials and programs.

d. More transmitters of Spanish origin should be recruited.

3. Recommendations on DHEW drug education technical assistance and research.

a. DHEW should develop stronger technical assistance capabilities to support program development at the community level.

b. Early lines of communication should be established with community-based drug education programs.

c. Funds for the development and production of drug information materials should be available at the community level.

d. DHEW should use the six communities studied as test areas for implementing new programs and materials.

e. DHEW should expand research efforts in educational techniques, transmitter selection and training, impact of varied settings and cost effectiveness analysis.

4. Recommendations on DHEW drug education information and materials.

a. The National Clearinghouse for Drug Abuse Information (NCDAI) should continue to function as a central repository.

b. The Clearinghouse and DHEW should substantially increase efforts to provide information and materials to transmitters on the community level.

c. A classified series of guidelines and materials should be developed to assist drug program development.

5. Recommendations on DHEW overall management organization for drug education programs.

   a. DHEW should establish coordination of drug education programs at the Assistant Secretary level.

   b. A three-year comprehensive drug education program strategy should be developed.

   c. DHEW should define and clarify its relationship to SAODAP.

Swisher, John D., and Crawford, James L., Jr. An evaluation of a short-term drug education program. The School Counselor, 18:265-273, March, 1971.

DRUG	Multi-Drug
SAMPLE SIZE	207
SAMPLE TYPE	Students
AGE	Adolescents
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Evaluation
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	8

SUMMARY

The results of an evaluation of a drug education program are described. Sponsored by a private school for its 9-12 graders, the program comprised a series of 4 lectures and subsequent discussion groups led by psychiatrists. For 12th graders the discussion group included adolescent addicts from a hospital. Pre- and post-test evaluations were conducted, using attitude, knowledge, and behavior scales and a student evaluation scale. Results showed no significant differences on attitude scores; significant differences on

knowledge scores; no reduction in reported use of marijuana; and generally favorable ratings by students. The authors recommend caution in the use of short-term approaches in view of their minimal impact on attitude and behavior.

METHODOLOGY

The 9th grade program consisted of 3 one-hour group sessions, 23 students per group, led by a psychiatrist. The 10th, 11th, and 12th grade program consisted of one large group session (70 students) for one hour, led by 3 psychiatrists, followed by 3 small discussion groups, each led by one psychiatrist for the remaining 2 hours. The 12th grade program included patients from the adolescent drug unit of a hospital. The programs were offered on 4 consecutive Thursday mornings. There was no participation by faculty or administration.

The impact of these 3 approaches was measured by:

1. A 14-item attitude scale (7 positively and 7 negatively worded items) in issues such as legalization of marijuana, penalties for drug use, etc.
2. A 30-item knowledge scale measuring knowledge in 5 areas, including narcotics, marijuana, LSD, amphetamines, and barbiturates.
3. A 33-item behavior scale assessing student health habits and motives for these habits; each question was asked about cigarettes, alcohol and marijuana.
4. A 7-item student evaluation scale to assess student perceptions of the program.

These were administered 2 days prior to the first session and readministered one week after the last session. Confidentiality was assured by using birthdates to match pre- and post-test scores.

FINDINGS

Attitudes

Analysis of variance for attitude scores yielded no significant differences between or within treatments. The mean scores for all grade levels changed (but not with statistical significance) in a pro-drug direction. It seems the various programs had little effect on student attitudes.

Knowledge

Analysis of variance for knowledge scores yielded significant differences as a whole, as well as among various grade levels. Freshmen had the least knowledge, seniors the most. There were no significant differences for test results by grade level, indicating that the 3 approaches provided equal amounts of information to all grade levels.

Marijuana Use

Chi-squares for pre- and post-test use of marijuana showed no reduction in use.

Student Perceptions

Students' perceptions of the program produced interesting results. Seniors rated the program very high relative to other school-wide programs. They found the use of adolescent addicts of great help. Sophomores and juniors rated their program as more informative than other grade levels. Freshmen reported more discussion with their parents, but 80% of all students reported little or no discussion in class.

CONCLUSIONS

Short term programs, though intensive and sophisticated, have little impact on attitude. Any kind of discussion is likely to have some impact on knowledge. Student perceptions of impact (e.g., juniors and sophomores rating programs as informative) are not always validated by objective measurements. Actual junior and sophomore test results showed no greater increase in knowledge than for other grades.

Future programs should weigh the cost of short term, crisis oriented approaches against their minimal impact on behavior and attitude. Longer-term approaches are in the experimental stage in Fresno, California and in the State College Area Schools. These await evaluation but appear more promising.

Swisher, John D.; Warner, Richard W.; and Herr, Edwin L. Experimental comparison of four approaches to drug abuse prevention among ninth and eleventh graders. Journal of Counseling Psychology, 19(4): 331-332, 1972.

DRUG	Multi-Drug
SAMPLE SIZE	216
SAMPLE TYPE	Students
AGE	Adolescents
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	8

SUMMARY

This research investigated the effects of 4 approaches to drug abuse prevention on students' knowledge about drugs, their attitudes toward drug abuse, and the degree to which they used drugs. Ninth- and eleventh-grade students were assigned randomly to 1 of 4 treatment groups: model reinforcement group counseling utilizing a reformed drug abuser as a model, model reinforcement group counseling utilizing a non-drug abusing individual as a model, verbal reinforcement group counseling, and the standard health unit. Findings were: (a) all 4 treatments were effective in increasing

students' knowledge about drugs, (b) none of the treatments had any impact on student attitudes toward drug abuse or the degree of drug usage, and (c) no differences appeared between treatments on any of the 3 criterion variables.

METHODOLOGY

In order to investigate the effectiveness of drug abuse prevention programs in secondary schools, 4 different approaches were chosen for testing:

1. A standard unit in health classes;
2. Relationship counseling groups where students were free to discuss drug abuse in any manner, the counselor remaining neutral and acting merely to facilitate discussion;
3. Reinforcement counseling groups, using 2 college aged non-drug-abusing models, who were pre-selected and trained for their role of directing the discussion toward reasons for not taking drugs, and a counselor who would direct discussion toward alternatives to drug use and encourage student statements on noninvolvement with drugs; and
4. Reinforcement counseling groups identical to type 3 except that the role models were former drug abusers.

All counselors were at the M.A. level or beyond. They all underwent 2 10-hour training programs, 1 on relationship counseling and another on behavioral counseling to provide common orientation to the treatment.

Eighty-one ninth grade and 91 eleventh grade students, stratified by 3 intelligence levels, were randomly assigned to 3 types of experimental groups (3 9-member groups of each type). Twenty-seven students at each grade level served as controls, exposed only to the standard health unit. Counselors were also assigned randomly. Groups met once a week for 6 weeks.

The informational, attitudinal and behavioral dimensions of the investigation were measured by:

1. A 41-item achievement test to assess changes in level of knowledge about drugs;
2. A 14-item attitude scale to assess attitudes on issues such as legalization of marijuana; and
3. A 35-item health habits scale to assess current involvement, motivation for use, circumstances of use, and source.

FINDINGS

1. In both 9th and 11th grades, each of the 4 approaches yielded essentially the same significant increase in drug knowledge from test occasion to test occasion.

2. None of the treatments had any impact on student attitudes on drug abuse or the degree of drug use.

3. No differences appeared between treatments on any of the 3 variables that formed criterion of counseling effects (cognitive, affective and behavioral).

4. Peer group use was highly correlated with personal use.

5. Correlations between drug use and alienation as measured by Dean's 1961 alienation scale administered to the 11th graders approximated 0.00. These results cast doubt on the theory that drug users are motivated by alienation.

CONCLUSIONS

Straight information-giving approaches have previously been shown to result in increased, rather than decreased, drug use. The results of this study, attempting to determine whether various counseling approaches are more effective, showed no differences between the treatments. Preventative programs may indeed do more harm than good. More evaluation of programs and more data on their effectiveness is needed.

Swisher, James D., et al. Drug education: Pushing or preventing? Peabody Journal of Education, 68-75, October, 1971.

DRUG	Multi-Drug
SAMPLE SIZE	993
SAMPLE TYPE	Students
AGE	Adolescents
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specifie
NO. OF REFERENCES	8

SUMMARY

This study examined the assumption that drug education programs based on informational approaches are insufficient and even self-defeating. Findings showed a negative relationship between knowledge about drugs and attitudes towards drug abuse. The authors recommend that educators consider this carefully: more adequate research, comprehensively evaluated, is necessary in order to design more effective alternative programs.

METHODOLOGY

In order to explore the relationships between a student's knowledge about drugs and his attitudes toward use, as well as between his knowledge and his actual use, 3 scales were constructed:

1. A 14-item attitude scale (7 positively and 7 negatively worded items) on issues such as legalization of marijuana, penalties for drug use, etc. A single score derived from responses and pre-test data yielded a split half reliability coefficient of .84.
2. A 30-item knowledge scale measuring knowledge in 5 areas including narcotics, marijuana, LSD, amphetamines and barbiturates; the uncorrected split half reliability coefficient was .69.
3. A behavior scale assessing student health habits, e.g. drug use, age of first use, frequency, etc.

These were administered to 250 students at a private college preparatory school, 609 students at a Catholic high school, and 134 students at a regional campus of a major state university, none randomly selected, totaling 993 subjects.

FINDINGS

1. There was a consistent, statistically significant negative correlation between level of knowledge and attitude to drug use for all three samples. The more knowledge a student had, the more pro-drug use he was.
2. When measuring the differences in levels of knowledge and attitude between users and nonusers of marijuana, it was found that drug users are more knowledgeable, and knowledge about drugs is associated with use. Marijuana users were also found to be consistently more liberal in their attitudes towards drug use.

CONCLUSIONS

Possible interpretations of the findings are presented.

1. Drug users' superior knowledge comes from experience. This knowledge differs from that included in drug education programs.
2. Drug users hold more liberal attitudes in order to justify their behavior. But, since attitudes resist change, only information consistent with their point of view would be accepted.
3. Factual drug education programs desensitize the fear of drugs and might heighten curiosity, leading to increased experimentation and use.

The assumption that drug education programs relying on information alone will prevent or reduce drug use was shown to be false. Such programs indeed may have the opposite effect. Yet there is no existing model for planning effective drug education programs. More research, development and demonstration is needed. Some schools are trying to integrate the basic concepts and an attitude of drug respect into the total K-12 curriculum.

Swisher, John D., and Warner, Richard W. "A Study of Four Approaches to Drug Abuse Prevention." Final Report. U.S. Department of Health, Education and Welfare. Office of Education. Bureau of Research. 1971.

SUMMARY

The purpose of this study was to compare the relative effectiveness of four approaches to drug abuse prevention among secondary school youth. The four approaches employed were:

1. A standard unit in health classes dealing with drug abuse;
2. Group counseling using relationship techniques in addition to the health unit;
3. Group counseling using model reinforcement techniques and a role model who has not abused drugs in addition to the health unit; and
4. Group counseling using model reinforcement techniques and a role model who is a reformed drug abuser in addition to the health unit.

Criteria for evaluative purposes included gain in knowledge, changes in attitudes, and reduction in drug abuse rates following the study. The primary objectives of this project included:

1. Discovering the most effective means for increasing a secondary school student's knowledge regarding drug abuse.
2. Discovering the most effective means for transmitting reasonable and cautious attitudes to secondary school students regarding drug abuse.
3. Discovering the most effective means for reducing the incidence of drug abuse among secondary school students.

Subjects were randomly selected from the ninth and eleventh grades where all students are receiving instruction in drug abuse through a health unit. Students in both grades were stratified by levels of intelligence into 3 groups (above average, average, below average). Subjects were randomly assigned within each of the 3 levels of intelligence to the 12 groups at each level. Counselors were randomly assigned to the treatment groups with each counselor conducting 1 group of each type. Two college-age role models (1 male, 1 female) were assigned to 2 groups of only 1 type at each grade level.

Treatment groups were scheduled to meet once each week for 6 weeks. Counselors were scheduled to avoid running 2 groups back to back and to avoid running 2 groups of the same type on any particular day. Role models were also scheduled to avoid participation in 2 groups run back to back.

Prior to treatment, a pre-test was administered to ninth and eleventh grade students. A college level form employed in previous research (Swisher and Horman, 1968) to measure changes in level of knowledge and attitudes regarding drug use was revised to suit high school students. Following the group sessions and at a 3 month interval the same instrument was administered as 2 post-tests.

This study failed to identify any 1 approach as being more successful than any other approach with regard to knowledge gained, attitudes changed, or the use of drugs. In general the health unit provided a substantial information base as evidenced in all of the group scores. None of the approaches, however, had any impact on the attitudes of the students toward drugs nor were any of the approaches effective in reducing amount of drug use. Further analysis of the counselors' behavior indicated that they were not functioning consistently in terms of the group techniques. Those who did function as reinforcement counselors moved their groups toward healthier attitudes and reduced use of drugs, but with only 2 of the 6 counselors functioning appropriately these results did not lend themselves to adequate statistical analysis. It is also important to note that the involvement of drug experienced models did not show any particular effects.

In future programs of this nature the group leaders' behavior ought to be supervised and changes made in their functioning in order to more adequately examine the relative effectiveness of these alternatives.

Richards, Louise G. Psychological sophistication in current drug abuse education. In: Wittenborn, J.R., et al., eds. Communication and Drug Abuse. Springfield, Illinois: Charles C. Thomas, 1970. pp. 43-54. (18 references).

SUMMARY

The proliferation of drug education programs has created a need to develop sophistication in their selection. This report summarizes current drug abuse education activities, according to the psychological principle operant in them. Drug abuse education is defined as "reasonably accurate information on abused or illegal drugs, conveyed via a psychological principle (or force) and designed to change individuals' knowledge, attitudes, or behavior in a direction desired by the educator". Accepting the prevention of illegal drug use (not merely the presentation of drug information) as the goal of such education, the author questions our knowledge of the effectiveness of such education. Seven approaches seen in current programs are classified and described together with their psychological principles.

DRUG EDUCATION APPROACHES

1. Fear of consequences. This treatment is a traditional principle, implemented by a leaflet, film, or lecture presenting the dangers of drug-taking. The educator hopes that students' recall of negative reinforcement will lead to avoidance. This approach has been widely criticized as ineffective. It brings disrespect, and may cause resistance to all proscriptive advice. It lacks credibility by assuming that because bad results have occurred on occasion, they will always occur, or because an event (e.g., marijuana use) precedes another (e.g., heroin use), it therefore causes it. However, conditions may exist under which scare tactics work, as Haefner found in dental health education among working- and lower middle-class students. The fear approach must be based on valid information and the material must fit circumstances that the students recognize as familiar. It has its place if used honestly and intelligently.

2. Logical argument. Exhortatory methods and materials are designed on the principle that the student wants evidence for decision making. Older one-sided presentations are no longer considered effective. Now many panels are patterned on multi-sided models. There is some evidence that examining the pros and cons of an issue can temper an extreme position. However, multi-sided arguments are

inappropriate for young children who have not yet developed judgement; they can be interpreted as invitations to experiment. They are certainly effective for adults, particularly those who are not yet firmly committed to a position.

3. Authoritative source. The use of a professional or experiential authority is an old method. Doctors, lawyers, police, psychologists, ex-addicts are used as "experts". Authorities are not accepted as equally useful. For example, Michigan high school students rated doctors high, addicts near the median, and police, ministers and school counselors low. The use of ex-addicts at a Boyle Heights, Los Angeles, junior high school was rated highly successful by both students and teachers. While discontinuities among the views of teachers and ex-addicts led to some distrust, and certain students overly admired the ex-addicts, yet the students were clearly very motivated to learn from them, and they lent a credibility to the subject which the teachers could not. Ex-addicts may not be valuable as sources of factual information per se, but their use may be one of the few successful ways to change attitudes.

4. Use of peers. This technique assumes that learning occurs when rewarded by increased status in present or future roles. New York pharmacists were trained at Columbia University to speak on drug abuse at schools and community centers. Students in Coronado, California, conduct fact searches and then, as student-teachers transmit information to their peers. This two-step method requires a first level effort to set up a workable system and success at the second level may well depend on other factors such as the speaker's personal attributes and the specific situation.

5. Cognitive mode. A traditional method of transmitting information. This approach is not obviously persuasive, but recent conceptual materials contain carefully selected "exemplars" of drug effects, in the hope that students will "attain" a concept that they can apply behaviorally. Much of this material emphasizes pharmacological information. This is being developed, for instance, in California schools, by integration into a larger curricular unit, e.g., the study of the nervous system includes the effects upon it of drugs, in the hope that increased understanding will result in a respect for the dangers of use. This approach, while informative, is not directly effective in changing attitudes or behavior.

6. Encounter methods. Used for both prevention and rehabilitation. The principle underlying the encounter method is that attitudes towards drugs are closely related to feelings of identity and attitudes towards others and to society. Psychologists are divided as to the merits of encounter versus individual psychotherapy. Little is known about the effectiveness of either in educational settings.

7. Drama. The addition of humor or entertainment to the drug abuse method is a recent technique. There may be little substantive information in comic films or plays, but they excel in conveying ideas on the role of drugs in behavior, and they catch the students' interest, affecting them in unusual ways.

CONCLUSIONS

None of the above approaches is the most sophisticated, nor the best single solution. Each is useful in different settings and for different audiences. The designer of a successful educational program must know the "operant level", i.e., his audience's characteristics. For instance, the higher the intellectual level of the target group, the less effective are scare tactics, one-sided arguments or the use of authority alone. For drug users, traditional methods work less well than for experimenters and tasters. Users need approaches that include self involvement and role-playing. Newer methods may be less successful with younger, less educated students, and those inexperienced in drug use. Likewise, the age, social role, and attitudes of student audiences must be considered when choosing an approach. Matching approaches to conditions and monitoring feedback can improve current drug abuse education.

II. ATTITUDES TOWARD DRUGS

Stoessel, Robert E. Exploration of the attitudes of students involved with drugs. In: Keup, Wolfram, ed. Drug Abuse: Current Concepts and Research. Springfield, Ill.: Charles C. Thomas, 1972. pp. 215-220.

DRUG	Multi-Drug
SAMPLE SIZE	155
SAMPLE TYPE	Students and 15 Therapy Patients
AGE	140 Adolescents, 15 Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	4

SUMMARY

As a result of growing concern over the increase of narcotics use and drug related deaths among students, the author administered a Drug Attitude Inventory to assess differences in attitudes between drug users and nonusers. This inventory was meant as a first step toward formulating a preventative drug education program.

The results of the inventory, administered to junior high students, one-half of whom were drug users, and to patients in psychotherapy for drug abuse, indicated significant differences between users and nonusers in attitudes towards drugs.

METHODOLOGY

The author gave the Drug Attitude Inventory to 140 junior high school students, one-half of whom were admitted drug users and to 15 clinical patients in various stages of psychotherapy for drug abuse.

The drug attitude inventory used consisted of 25 statements regarding drugs with which each subject was asked to indicate whether he "strongly agreed," "agreed," was "undecided," "disagreed," or "strongly disagreed." The subject was asked to respond to every statement. An item analysis was used to ascertain the most discriminating statements, and a chi-square analysis was computed to evaluate the probability that discrepancies as great as, or greater than, those would have resulted from sampling fluctuations.

The clinical patients were grouped according to their length of time in therapy. The total score was obtained by summing all the responses of the discriminating statements, scoring the response categories as 5 through 1, and reversing the scoring for unfavorable statements.

FINDINGS

Except for 6 statements, all the statements differentiated the user from the nonuser. The 2 groups responded differently to 8 statements, and one group consistently favored one response while the other group showed an inconsistency in responding to the remaining 11 statements.

In all statements, except the 6 mentioned, the author felt the discrepancies found would be expected in less than 1% of the samples if there were no differences in the way drug users and nonusers responded.

For the patients in psychotherapy for drug abuse, the results indicated that the mean inventory score for each group was a positive function of the length of time in therapy. Scores showed a positive increase as time in therapy increased.

CONCLUSIONS

Students develop attitudes and actions toward drugs very early in their lives. Both actions and attitudes exist concurrently, and it is the author's contention that this study proves that attitudes can be used to differentiate drug users from nonusers. The writer further

contends that a successful rehabilitation program would result in a change in attitude toward drugs. One of the striking answers to the questions in the survey indicated that drug users believe themselves to be adequately informed about drugs. Often attitudes held by people lack validity because the people are not sufficiently well informed. The author feels that since their knowledge may be distorted and inadequate, the beliefs of drug users may be wrong.

Goode, Erich. The smoker's view of marijuana. In: Goode, E. The Marijuana Smokers, New York: Basic Books, 1970. pp. 69-93.

DRUG	Marijuana
SAMPLE SIZE	150
SAMPLE TYPE	Varied Occupations
AGE	Adults
SEX	53% Male and 47% Female
ETHNICITY	8% Black, 2.5% Puerto Rican, 89.5% White
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	February to September 1967
NO. OF REFERENCES	42

SUMMARY

This article presented the view of the smoker toward the cannabis experience. The user found marijuana to be a pleasurable experience, which generally enhanced personal interaction, music, art, and other aesthetic experiences. He saw himself not as a deviant but as one who has had a trivial and irrelevant leisure activity, or a privileged experience. Nowhere did the author find user acceptance of the mythology that the use of marijuana is an act of corruption, or a dangerous act.

METHODOLOGY

Goode's sample consisted of 53% men, with three-fourths of the respondents in their 20's. The majority were White, 8% were Black, and 2.5% were Puerto Rican. Twenty-seven percent had parents with a Protestant background, 44% were Jewish, and 14% had Catholic parents. A high proportion were students and 78% were single. All of the subjects were living in New York or its suburbs at the time of the interview. The interviews took place between February and September, 1967. The author conducted all but 2 of the interviews himself. At the time of the interviews, the author was 28 years old, and his informal attire, long hair and youth seemed to make the respondents more comfortable about answering his questions. The respondents were concerned that the author might be a law-enforcement person, but were reassured that this was not true. The author became a participant observer, interacting informally with many of the interviewees.

FINDINGS

Almost complete uniformity was found on the pro-marijuana side, in regard to the absence of damaging effects of cannabis. Users who saw the drug as harmful invariably discontinued its use. The bedrock of the pro-marijuana position, as voiced by such groups as LEMAR, is that the drug is essentially harmless.

Marijuana, when compared to alcohol, was seen by the user as much less dangerous. The marijuana user often expressed a sense of superiority to the liquor drinker, and this feeling formed an element in the marijuana subculture.

Data from an unpublished study indicated that marijuana smokers saw amphetamines as most dangerous, with alcohol and LSD contending for second place. They did not feel that marijuana produced psychological dependency.

One of the key points in attitudes toward marijuana was that pot is fun and pleasurable to smoke. Its sensual appeal appeared to be powerful and essential.

Marijuana appeared to have a positive impact on aesthetic impulses. Nine-tenths of those interviewed preferred listening to music while "high." Another music-enhancing power attributed to the drug was associated with its synesthesia characteristics. Several senses would be combined more vividly during the "high." About 1/10th of the respondents reported that colors were brighter while they were under the drug's influence.

Although no mention was made of using marijuana because it had the effect of releasing one's inhibitions, this was nonetheless seen as a beneficial effect of smoking marijuana.

Another positive quality attributed to the drug by users and supporters was that marijuana has an effect on human empathy. Through an inexplicable chemical, psychological or social process, or perhaps because of social definitions of this process, marijuana was seen to touch off a rapport in people that may have been absent before the high.

Ninety-five percent of the informants supported some form of legalization, and 80% wanted to see legalization without any restriction.

Marijuana smokers did not look upon themselves as deviants. They did not feel that what they were doing was wrong.

CONCLUSIONS

The author stated his belief that man, under the influence of cannabis, will do little unlike what he would do normally. He feels that part of society's wrath stems from the unwillingness on the part of the marijuana subculture to see the other side, from their lack of shame and even their feeling of superiority to the rest of society.

Carlin, Albert S., et al. Social facilitation of marijuana intoxication: Impact of social set and pharmacological activity. Journal of Abnormal Psychology, 80:2 (133-140), 1972.

DRUG	Cannabis
SAMPLE SIZE	40
SAMPLE TYPE	Volunteer
AGE	Adults
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Laboratory/Examination
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	9

SUMMARY

The research reported was based on the assumption that marijuana intoxication is the result of a variety of factors--psychological, social, as well as pharmacological. Four such factors, identified by the authors, are: (a) the act of smoking combined with the knowledge that it is marijuana which is being smoked; (b) the physical and social setting in which the smoking is done; (c) the set of the individual with regard to marijuana and its effects; and (d) the pharmacological effect of the drug itself, and the idiosyncratic reactions of the individual.

The experiment reported was directed toward assessing the differential influence of social setting and pharmacological effect on the induction of marijuana intoxication. A series of two controlled experiments was conducted.

Experiment I

Method: Testing was done on 40 experienced male marijuana users between the ages of 21 and 32. Subjects were tested in pairs, one subject given placebo, the other 15 mg. of Δ9 THC. The drug assignment was double blind.

The social setting was manipulated in two ways. An accomplice of the experimenter, alleged to be a third subject, was present to form an "intoxicated" or "unintoxicated" majority with one of the pair. Second, each subject was given a capsule reported to contain "Improxin" which was introduced as either a potentiator or attenuator of marijuana intoxication. The introduction given cued the accomplice to his role for that session.

Subjects rated on a scale of 1 to 100 the potency of the drug consumed, their degree of intoxication, and the degree to which the other subject and the accomplice were intoxicated. A variety of cognitive and motor functioning tests were then administered, including: Alternate Uses; Association IV; Color Naming; Digit Symbol; Hidden Figures; Pursuit Rotor; and Time Estimation.

Results: The ratings of the marijuana quality and of their own intoxication were a function of the substance received and were apparently not influenced by the social setting. Performance on most assigned tasks was significantly worse among those given marijuana than among those who smoked placebo.

Experiment II

Method: The experimental design of this second project was similar to that of Experiment I with respect to sample size and selection and manipulation of social setting. In this case 50 percent received placebo; 25 percent received 7.5 mg. Δ 9 THC; and 25 percent received 15 mg. Δ 9 THC. Subjects receiving placebo cigarettes were given either 10 or 25 mg. of Librium as "Improxin." The "Improxin" given those smoking marijuana again contained lactose. Drug assignment was still double-blind.

Results: The ratings were uninfluenced by social setting or dosage. However, there were significant differences according to drug received. The test measures were differentially affected by all three variables: social setting, drug, and dose level. The general trend indicated that social setting and the individual set affected the marijuana experience only at moderate dosages.

CONCLUSION

At low doses of marijuana, the effects of social setting, belief and dosage seemed to be interrelated. However, at high dose levels, the drug alone appeared to influence the degree of intoxication. Performance and reports of placebo groups were not affected by setting and belief.

Johnston, Lloyd. Drugs and American Youth. A Report from the Youth in Transition Project. Ann Arbor, Michigan: Institute for Social Research, Univerity of Michigan, 1973. 273 pp.

DRUG	Multi-Drug
SAMPLE SIZE	2,200
SAMPLE TYPE	Students
AGE	Adolescents
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Cross-Sectional
METHODOLOGY	Longitudinal
DATA COLLECTION INSTRUMENT	Interviews, Questionnaires
DATE(S) CONDUCTED	1966 to 1970
NO. OF REFERENCES	53

SUMMARY

The research reported is the result of the fourth data panel of a longitudinal study of adolescent males. The original purpose of the study was to assess the causes and consequences of dropping out of high school. New research questions were added through the years. By the time of the 1970 data collection, illicit drug use had become a widespread phenomenon which the investigators felt they could help to explain because of their unique in-depth information on the personalities, backgrounds and social environments of a

large national sample. A short questionnaire on drug use was included in the 1970 data collection.

The data reported here concentrates on the respondents' attitudes toward drug use.

METHODOLOGY

The original sample consisted of 2,200 10th grade male students who attended 87 different schools across the country. In 1970 most of the subjects had been out of high school for one year. The investigators were successful in locating and interviewing 71% of the original sample. Subjects were asked to complete a confidential questionnaire on the history of their use of tobacco, marijuana, amphetamines, barbiturates, heroin, hallucinogens, and alcohol. The subjects were also questioned as to their friends' use of those substances; their own attitudes about drugs; their ease of access to marijuana and heroin; and their sources of aid for drug problems.

Respondents were asked to indicate their approval or disapproval of the use of various drug substances on a 5 point scale. A 6th point was reserved for use in the absence of a felt attitude.

FINDINGS

Over 70% of the respondents disapproved of using amphetamines, barbiturates and hallucinogens, even experimentally. Over 80% disapproved of the use of heroin.

Marijuana received much less disapproval. Only 47% disapproved of the experimental use of marijuana; 25% responded that their feelings were neutral; 21% approved. Frequent use of marijuana received less approbation, with 65% responding negatively, and only 9% positively.

A cluster analysis was conducted on this data to determine the interrelatedness of the attitudes expressed. In most cases, attitudes tended to be drug-specific, although in the case of amphetamines and barbiturates, attitudes were intensity specific. Attitudes toward marijuana and alcohol remained independent; attitudes toward the other illicit drugs showed an inter-correlation. From this cluster came a "more serious illegal drugs" attitude index.

In comparing attitudes expressed by users with those of non-users, some significant differences were found. Regular marijuana smokers were nearly 2 standard deviations away from non-users on the marijuana attitude index. Heroin users were 2 1/2 standard deviations from non-users in the "more serious illegal drugs" attitude index.

The intermediate use groups consistently fell between the extremes for all drugs; this resulted in an ordinal relationship, in every case, between degree of use and approval of use.

Additionally, it was found that the higher one's drug use rate, the greater is the approval of other drug use.

CONCLUSIONS

The authors conclude from these findings that young people are more conservative in attitudes about drug use than is popularly believed. The number of subjects responding positively to the attitude questions was small. The relationship between use and attitude indicates that permissiveness of attitude toward non-conforming peers is less than was expected. The authors state that the continuing adherence of American youth to traditional practices "may ultimately be the most important fact about youthful drug practices to emerge from this study at least from the perspective of health and public safety."

Suchman, Edward A. The "hang-loose" ethic and the spirit of drug use. Journal of Health and Social Behavior, 9(2):146-155, 1968.

DRUG	Cannabis
SAMPLE SIZE	497
SAMPLE TYPE	Students
AGE	Adults
SEX	Both Male and Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	West Coast, U.S.A.
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Interviews; Questionnaires
DATE(S) CONDUCTED	November 1967
NO. OF REFERENCES	15

SUMMARY

The study represents an attempt to ascertain basic facts about the use of drugs by one college population and to examine causes and consequences of the use of drugs. The major assumption was that drug use on campuses today is largely limited to the occasional smoking of marijuana cigarettes and represents a social form of recreation far removed in nature from the traditional problem of narcotics addiction and alcoholism. The set of hypotheses tested was that the use of marijuana will be highly associated with other expressions of a new breed of youth characterized by a "hang-loose" ethic as described by Simmons and Winograd:

> One of the fundamental characteristics of the hang-loose ethic is that it is irreverent. It repudiates, or at least questions, such cornerstones of conventional society as Christianity, "my country right or wrong," the sanctity of marriage and premarital chastity, civil disobedience, the accumulation of wealth, the right and even competence of parents, the schools, and the government to head and make decisions for everyone--in sum, the Establishment.

The author assessed the relationship between drug use and the "hang-loose" ethic as evident in behavior, attitudes, and personality. He found that the more one's behaviors, attitudes, and personality conform to the "hang-loose" ethic, the more likely one will be to approve of smoking marijuana and the more likely is it that one will associate with other students who smoke marijuana.

METHODOLOGY

In November 1967, at a West Coast university, 600 students out of a student body of 12,200 were selected at random from the registration lists of undergraduate and graduate students. A questionnaire dealing with drug use and various aspects of college life, educational and political values, and current social issues was prepared on the basis of detailed interviews of students. Interviews and observation were carried out by 125 students enrolled in a course on social research methods.

The questionnaire was administered in two parts of almost equal length. The first part was a personal interview. The second, which sought information on more sensitive topics such as sex, drug use, and the draft was anonymous. It was filled out and placed with the first part in a sealed envelope without identification. The completion rate of interviews was 81%.

The dependent variable was frequency of drug use as reported by the respondent. The major independent variable was the degree of adherence to the "hang-loose" ethic as determined by a series of questions designed to tap behavioral patterns, attitudes and values, and self-image and personality. Also studied was the student's self-image in respect to conformity, in order to index his own portrait of himself-vis-a-vis the established order.

For demographic control each of the major differences in behavior, attitudes, and personalities between users and nonusers of marijuana were examined separately by sex, income, and religious group.

FINDINGS

The findings are grouped by prevalence of drug use; alcohol and marijuana; demographic comparisons; behavioral, attitudinal, and personality correlates of the "hang-loose" ethic; demographic controls; and attitude toward use and frequency of use by other students.

Drug Use

Of the total sample (497), 21.2% indicated that they did use drugs, which was consistent with previous studies. Of these, all used marijuana; 18% (2.2% of the entire population) used LSD occasionally. A wide variety of other drugs also were listed, none by more than 10%. The word "drugs" in the author's report, therefore, equates largely with marijuana.

The relationship of attitudes toward use and actual use of marijuana is, not unexpectedly, extremely high. Approval is much more likely to mean use (45.7%), with only a small minority (0.6%) disapproving of smoking marijuana at the same time they smoke.

Demographic Comparisons

The use of drugs varies significantly by sex, social class, marital status, and religion. Males are almost three times as likely as females to use drugs at least once a week, upper income groups twice as likely as lower income groups, single students four times as likely as married students--with engaged students showing the greatest use, and Atheists and "other religious affiliations" reporting much more use than Protestants, Catholics, and Jews.

The "Hang-Loose" Ethic: Behavioral Correlates

The findings revealed that 34.3% of those who participate frequently in "happenings" are drug users; 42% who read "underground" newspapers are drug users; and 45.9% who participate in mass protests are users.

The "Hang-Loose" Ethic: Attitudinal Correlates

Drug use is found more likely to be reported by those students who are relatively antagonistic to the educational system and who are dissatisfied with the education they are receiving. Of those who disagreed that American colleges today should place more emphasis on teaching American ideals and values, there were seven times as many marijuana smokers as non-smokers.

On the political scene, 37.5% among those favoring military withdrawal from the Vietnam War were drug users; 32.0% of those believing that "human lives are too important to be sacrificed for any form of government" were drug users; and 35.2% of those opposed to military service used drugs.

In social attitudes, drug users are more likely to be found among those who feel it is all right to get around the law if you don't actually break it (34.6% vs. 13.8%) and who feel that the "hippie" way of life represents a desire for serious change as opposed to an unproductive expression of non-conformism (26.6% vs. 10.5%).

The author noted that one finding in regard to social attitudes appears contrary to many claims made about drug use: an impressive lack of any association between drug use and alienation. He concludes that the "hang-loose" ethic, while it may represent antagonism to the conventional world, does not appear to create apathy and withdrawal.

The "Hang-Loose" Ethic: Personality Correlates

The more the student's self-image tends to be rebellious, cynical, anti-establishment, "hippie" and apathetic, the more likely is he to smoke marijuana. Conversely, the more his self-image tends to be conformist, well-behaved, moral, and "square," the less likely is he to make use of marijuana. The greatest differences are to be found between those students who regard themselves as "hippies" (39% difference in favor of use) or well-behaved (37% difference against use).

Demographic Controls

Analysis of demographic controls of sex, income, and religious group shows that in almost every instance, the differences in marijuana use occur independently for both the demographic control and the behavioral, attitudinal, and personality correlates of the "hang-loose" ethic. The "hang-loose" ethic continues to be related to marijuana smoking regardless of the subgroup of the student population being studied.

Attitude Toward Use and Frequency of Use by Other Students

As hypothesized, the most frequent use of drugs occurs among those students who have both a favorable attitude toward the use of marijuana and an adherence to the "hang-loose" ethic. Even among those with an unfavorable attitude toward use of marijuana, use will be higher with adherence to the "hang-loose" ethic. Similarly, given a favorable attitude toward use of marijuana, actual use is much more likely to take place among those students displaying "hang-loose" attitudes, behavior, and personality.

The author concludes that on the basis of these interrelationships of demographic characteristics, attitudes, behavior, and personality to drug use, the following sequence or chain of events appears probable: adherence to the "hang-loose" ethic is more likely to occur among certain predisposed personality types (i.e., rebellious, cynical) and in certain social subgroups (i.e., males, nonreligious); such adherence is likely to lead to a favorable attitude toward smoking marijuana both for its "high" effects and its symbolism of rebellion against authority; this favorable attitude will be supported by other students who also embrace the "hang-loose" ethic and engage in similar overt and covert expressions of rejection of the established order. Finally, given this climate of opinion and behavior, the smoking of marijuana becomes almost a "natural" act for may students far

removed from the public's current efforts to define it either as a legal or a health problem.

CONCLUSIONS

The findings indicate, however, that regardless of group membership, the "hang-loose" ethic will be related to marijuana use. The attitudes of use and the "hang-loose" ethic become independent factors in marijuana smoking, reinforcing each other with the greatest use occurring among those students with a favorable attitude who also believe in the "hang-loose" ethic. Finally, the student's use of marijuana is strongly supported when his friends also smoke marijuana.

These findings, the author concludes, have significance for both sociological theory and social action. From a theoretical point of view, they support the interpretation of drug use as part of a subcultural group way of life strongly characterized by a "hang-loose" ethic which attempts to cut itself loose from the traditional "establishment" and to develop freedom from conformity and the search for new experiences. Use of marijuana constitutes an important means both of attaining "freedom" from the pressures of society and of expressing antagonism toward the "unfair" laws and restrictions of that society.

In the absence of evidence that marijuana smoking has serious health effects or leads to crime, the author cautions that to powerfully crack down on these youth and to justify such a restriction of freedom in the name of preventing crime or disease seems more an uncontrolled expression of adult moral indignation and righteousness than of human concern or social justice. Surely, he asks, it should be possible to express one's disapproval of marijuana and to seek its control without making its use a crime against society.

Anker, Jeffrey L., and Melman, Doris H. Patterns of nonmedical drug usage among university students. Student attitudes toward drug usage. In: Keup, Wolfram, ed. Drug Abuse: Current Concepts and Research. Springfield, Ill.: Charles C. Thomas, 1972. pp. 202-214.

DRUG	Multi-Drug
SAMPLE SIZE	7,032
SAMPLE TYPE	Students
AGE	Adults (18-24)
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	New York (New York State University)
METHODOLOGY	Statistical Survey
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	May 1969
NO. OF REFERENCES	6

SUMMARY

This study was conducted in May 1969 to determine patterns of and attitudes toward drug usage among undergraduate and graduate students of the State University of New York. The authors felt that a perspective of student attitudes towards drug usage is necessary if society is to develop an approach and attitude toward drug use which is realistic and meaningful.

This study focused on learning students' opinions about drug use, concentrating on three facets: (1) to gain insight into the extent that students accepted and were open to drugs; (2) to determine the extent

to which students considered certain drugs harmful; and (3) to determine how drug users view the effect of drugs on their lives.

Students who, in response to the questionnaire claimed "I don't know," were considered open to the idea of drugs. Those who were taking drugs; willing to take drugs; or approved of others taking drugs although they did not define themselves as drug users, were considered accepting of drugs. The results are presented separately for graduates and undergraduates. It was concluded that there was more acceptance of marijuana, cannabis preparations, and alcohol than there was for harder drugs.

METHODOLOGY

This study was conducted by means of an anonymous self-administered questionnaire. A sample of 7,032 students was taken from the State University of New York. Of the 7,032, there were 6,110 undergraduates and 922 graduates. Further details on the methodology are not presented in this article but are included in other articles by the same authors.

FINDINGS

Study findings are presented in six statistical tables:

- Opinions of students on possible legalization of drugs
- Attitudes of students toward personal use of drugs
- Attitudes of students toward introducing own children to use of drugs
- Attitudes of students toward permitting younger siblings to try drugs
- Opinions of students about potential harm (psychological and/or physical) of drugs
- Opinions of drug users about the effect of drug use on their lives.

The results are summarized here.

Opinions of Students on Possible Legalization of Drugs

The greatest number of students (98%) felt that alcohol should be legalized. More graduates (77%) than undergraduates (44%) approved of the legal availability of marijuana. A number of students were also favorable to the legality of amphetamines, barbiturates, glue, and LSD. Most of the students who felt marijuana, alcohol, and hashish should be made legal felt they should only be available to those over 18. A demographic breakdown of undergraduate responses indicated the groups most likely to favor legalization were males, younger students, Jewish students, and students from more educated and higher income families.

Attitudes of Students Toward Personal Use of Drugs

More than two-thirds of the undergraduates and one-half of the graduate students indicated they did, would, or might try marijuana. The demographic subgroups breakdown of undergraduates showed that as family income increased, use and the proportion who said they would try marijuana increased.

Attitudes of Students Toward Introducing Own Children to Use of Drugs

Again, the order of rank by which students would or might introduce their own children to drugs was alcohol, marijuana, and hashish. Of those students who said they would introduce their children to drugs, most said they would do this when the child was mature, regardless of age.

Attitudes of Students Toward Permitting Younger Siblings to Try Drugs

Of those students with younger siblings between the ages of 12-18, 84% of the graduates and 78% of the undergraduates would permit them to use alcohol. For marijuana the results were 47% and 27% respectively.

Opinions of Students About Potential Harm (Psychological and/or Physical) of Drugs

Marijuana, and then hashish, were ranked as the least potentially harmful. Alcohol was ranked third least, with 96-98% of the students indicating heroin as being potentially harmful.

Opinions of Drug Users About the Effect of Drug Use on Their Lives

Most drug users stated there was no change in their lives due to drugs. Those who noted a change said it was for the better, and virtually none said drug use made their lives worse.

CONCLUSIONS

This study supports the concept that the present state of drug use is of a contagious nature. The authors propose a model of a self-escalating system in which openness to drug use eventually reaches 100%, soon to be followed by 100% acceptance and 100% usage. Study findings show that use, acceptance, and openness increase together. For illicit drugs, openness and acceptance exceed use. However, for alcohol, openness, acceptance, and use are approximately the same. The authors suggest that alcohol is at the end of the self-escalating system and hypothesize that cannabis is approaching that point. Once contagion has taken a foothold all demographic subgroups, with the possible exception of low-income families, become equally susceptible to drugs.

Students are seen as doubting and questioning establishment taboos against drug use. The authors question if it is too late to stop the total adoption of cannibis drugs; if not, can society prevent an explosion of openness to, and acceptance of, the more harmful drugs?

Smart, Reginald. Discrepancies between drug educators and students in attitudes toward marihuana: their implications for communication. Journal of Alcohol and Drug Education, 18(4):21-29, 1973.

DRUG	Cannabis
SAMPLE SIZE	582
SAMPLE TYPE	Occupational; Students
AGE	Adults; Adolescents
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Ontario, Canada
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	February 1972
NO. OF REFERENCES	10

SUMMARY

This paper reports the similarities and differences between drug educators and 2 groups of high school students - marihuana users and nonusers - on the marihuana legalization issue.

A variety of studies have shown that the position taken by a communicator cannot be too far away from that held by his audience, in order to be effective. Communications falling close to the audience's original position will be accepted but result in small shifts in position. Those which fall too far into the area of rejection will be rejected and create no attitude shift, and in fact may create a boomerang effect or negative shift. To be accepted and to create a large

attitude change, communications should fall just outside the latitude of acceptance.

The author found that despite discrepancies between the opinions of educators and users/nonusers, change in attitude is possible but that to be effective an educator's position on marihuana would have to be chosen with the audience's original position on marihuana in mind. Further, in order to maximize effectiveness, the chosen position should be within or not too far outside the latitude of acceptance of the audience.

METHODOLOGY

The sample consisted of selected individuals who had participated in a larger survey concerned with drug use and attitudes conducted in February 1972. Individuals who answered a "legalization question" in this survey became the sample.

The sample consisted of students in two small towns in southern Ontario, Canada, in grades 9 to 13 and of community consultants working for the Addiction Research Foundation (ARF) located in various areas of Ontario and spending at least 50% of their time in drug education.

All students who had reported using marihuana at least once in the past six months became the group termed Marihuana Users (N=260). The two student samples, the Marihuana Users and the Non-Users, were of equal size and grade composition.

Sixty-two individuals from the ARF were the educators in the sample.

The legalization question was a questionnaire containing eleven statements ranked in a progression from most positive--pro-legalization--(A) to neutral (E, F, G) to most negatively--anti-legalization (K) by independent rates.

All sample respondents were asked eleven statements as follows:

1. Which statement above is closest to your own position, or how you feel, on the issue of legalization? (Choose one statement only.)

2. Which other statement, or statements are also acceptable to you? (Choose none or any number of statements.)

3. Which statement do you disagree with most, or is most objectionable from your point of view? (Choose only one.)

4. Which other statement, or statements, are also objectionable from your point of view? (Choose none or any number of statements.)

FINDINGS

About half of each group took a more or less neutral stand. Fifty-eight percent (58%) of the educators surveyed chose one of the three central positions: E--(slightly favorable towards legalization); F--(completely neutral); or G--(slightly against legalization). The comparable figures for the Marihuana Users and the Non-Users were very similar: 50% for the Users and 48% for the Non-Users.

There were marked differences in the proportions of groups who chose the more extreme positions. None of the Drug Educators chose A, B, or C. Only two chose D as closest to their own position, and almost 39% chose the most anti-legalization statements as being the most acceptable to them. In sharp contrast, 43% of the Marihuana Users found A, B, C, or D as most acceptable, but only 7% found that positions H to K were closest to their feelings on the issue.

More similar to the Educators was the sample of Non-Users. About 12% favored A to D and 40% (almost the same as the Educators--39%) found H, I, J, or K the most acceptable stand. However, a much greater proportion of the Non-Users were at the extreme end of the continuum than were the Educators: 17% of the Non-Users chose K, compared to less than 2% of the ARF workers.

It was found however that even the most extreme Educators' limits of acceptability and non-commitment overlap with those of drug users. It was estimated that 98.7% of all users are reachable by the population of drug educators, given random matching of educators to users.

Statement G, "Although it is hard to decide, it may be that the interests of our society would be better served if marihuana were legalized", was found to be close to the acceptable position of the Educators and far enough away from the position of the students to create a large change in the desired direction. It was not rejected by any of the Educators, was within the area of non-commitment for a majority of Users (61%) and Non-Users (53%), and was rejected by only 23% and 7% respectively. It was the most objectionable statement for fewer than 1% of both Users and Non-Users. Statement F, "It is probable that the interests of our society would be better served if marihuana is not legalized", was found to be the next best position but it was rejected by some Educators and was in the area of non-commitment for fewer Users and Non-Users.

CONCLUSIONS

In general, educators and non-users have similar attitudes toward the legalization of marihuana. It would not be difficult for educators to communicate their attitude to non-users, given the rather small range of discrepancy usually existing between the two groups. The larger discrepancies for educators and users suggested that most educators will have the greatest difficulties communicating with marihuana users, and much less with non-users. This, the author noted, raises the question whether drug education for users and non-users can be effectively done with the same communicators and messages. He

suggests that educators should try out various positions on drug issues with different audiences, on some occasions with large discrepancies in original position,, and on some with smaller discrepancies. He also suggests that the communicator should know the original position of his audience before selecting a position. Depending upon the nature of his audience, the position selected should be within or close to the audience's latitude of acceptance, especially if the communicator is not a highly credible source. However, the findings show that the overlap between educators and marihuana users will usually be sufficiently large to allow educators to select statements not objectionable to themselves or the users.

Glaser, Daniel and Snow, Mary. Public Knowledge and Attitudes On Drug Abuse in New York State. New York: Narcotic Addiction Control Commission, June 20, 1974. 82 pp.

DRUG	Multi-Drug
SAMPLE SIZE	6,105
SAMPLE TYPE	New York State Residents
AGE	Adolescents and Adults
SEX	Both Male and Female
ETHNICITY	Black, Puerto Rican, and White
GEOGRAPHICAL AREA	New York State
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Late 1968
NO. OF REFERENCES	

SUMMARY

This booklet represented the results of a major survey undertaken in 1968, by the New York State Narcotic Control Commission to answer questions regarding knowledge of and attitudes toward drug abuse.

Findings indicated widespread ignorance, and general apathy regarding drugs among those responding to the survey. These results indicated more clearly to the authors the need for programs of education and action to increase state-wide awareness of, and response to, the problem of drug abuse.

METHODOLOGY

New York State was divided into 6 areas: New York SMSA, Lower Catskill, Adirondack, Upper Northern, Central, and Western. Each of the 6 areas was treated as a separate universe with the number of interviews to be obtained in each area determined according to the reliability of information needed. Within each of the 6 areas, the number of locations were drawn on a probability basis, in proportion to the number of households in Census Tracts in metropolitan areas and Minor Civil Divisions in non-metropolitan areas.

In late 1968, the New York State Narcotic Central Commission interviewers administered a lengthy questionnaire to 6,105 persons. The interviews were conducted in the respondents' own homes with 1 or 2 callbacks made if necessary. Over 80% of the respondents were seen.

It was hoped that the survey would produce answers to five questions:

(a) How concerned are New York State residents with drug problems in their neighborhood?
(b) How prevalent is drug abuse among them?
(c) How well informed are they about the effects of narcotics?
(d) What do they know and think about the agencies available for treating addicts?
(e) What are the most effective media for educating them on addiction and its treatment?

FINDINGS

Burglary and vandalism were the most frequently cited neighborhood problems in all parts of the state, except for non-metropolitan areas. Drug use was the third most often cited neighborhood problem in New York City. This was not true in the suburbs. Only in Upper Manhattan and South Bronx did most residents complain of drug use. Racial tension was the least mentioned problem of the twelve problems about which respondents were asked. Males and females were quite similar in their designations of neighborhood problems. Drug use was mentioned as a neighborhood problem three times as often by Negroes and Puerto Ricans as by Whites. Concern with drugs was quite similar at all income and educational levels.

For every drug, those who were 17 to 19 years old know more users than any other age group.

Although New York City had more persons knowing drug users than any other part of the state, the difference between city and suburbs was negligible. The greatest difference between the two in knowl-

edge was of heroin. Knowledge of marijuana users increased with income.

Survey subjects were asked for their views on the effects of marijuana, heroin, LSD and amphetamines. Those who knew users were better informed than those who did not. Knowledge of effects increased with income and with education. Those who knew users were more favorable in their views of effects of marijuana and amphetamines than those who did not know users. Those who knew users expressed more unfavorable attitudes toward heroin and LSD than those who did not know users. A lack o knowledge, or strong conviction, regarding drug use seemed to be more prevalent in areas of high drug use.

CONCLUSIONS

The data on public perceptions of drug addiction and its treatment led the authors to conclude that widespread ignorance and a dearth of opinion exist, along with a generally negative attitude toward drug use. One interpretation of the lack of knowledge or opinion in areas of high drug use was that the ignorance reflects a sense of powerlessness within communities beset with many problems and no adequate means to deal with them. The authors also speculated that it could represent a defensive denial of the possibility of the spread of drug use. They concluded that present conditions and attitudes justify the Narcotics Commission's action and education programs.

McGuire, William J. The nature of attitudes and attitude change. In: Lindzey, Gardner, and Aronson, Elliot, eds. The Handbook of Social Psychology. Vol. III. Reading, Mass.: Addison Wesley Publishing Co., 1969, pp. 136-314. (840 references).

SUMMARY

A comprehensive review of the state of the art of attitude and attitude change research, this chapter covers the major theories and research from 1920 to the early 1970's. The author covers historical trends, the theoretical status of attitude, and determinants of attitudes such as genetic factors, physiological factors and social communication. The majority of the chapter contains a discussion of the role of verbal communication in determining people's attitudes. Source, message, channel, receiver and destination factors are reviewed in detail.

Historical Background

Attitude research was dominant in social psychology during the 20's and 30's, then became overshadowed by group dynamics work. During the 60's, due in part to the work of Hovland, and also Festinger, attitude research again became a most popular research area.

Theoretical Status of Attitude

Allport defined attitude in 1935 as a "mental and neutral state of readiness to respond, organized through experience, exerting a directive and/or dynamic influence on behavior." The author reviews different approaches to the definition, and concludes that a mediational interactionist approach is more useful to theorizing while an operational definition is better in experiments.

Attitude is distinguished from the related concepts of knowledge, values, and opinions. The components of its structure are described by researchers either by means-end, or by cognitive-affective-conative analysis. Four types of functions performed by attitudes are discussed: (1) utilitarian (adaptive); (2) economy (knowledge); (3) expressive (self-realizing); and (4) ego-defensive.

Determinants of Attitudes

The author briefly surveys the following factors as determinants of attitudes: (1) genetic endowment; (2) various transient physiological conditions, such as aging, illness, drugs; (3) direct experience with the stimulus object whether as a single traumatic incident or as repeated cumulative contacts; (4) total institutions, such as childhood, i.e., the rearing regime of the home, and occasional adult experiences,

i.e., psychoanalysis of neurotic patients, and brainwashing of political prisoners; (5) non-verbal communication. Each affects attitude formation by providing specific content to the belief system, and by determining the dynamic characteristics (openness to change, degree of integration) of the system.

ATTITUDE CHANGE: SOCIAL INFLUENCE PROCESSES

The role of verbal communication in determining peoples' attitudes is discussed within a framework, described as a "matrix of persuasive communication," formed by columns which are the components of the antecedent (verbal communication) and rows which are the components of the consequent (attitude change behavior).

The independent variable (communication) is analyzed into five components: (1) source, (2) message, (3) channel, (4) receiver, and (5) destination. The dependent variable (attitude change) is analyzed into a series of successive behavioral steps: (1) attention, (2) comprehension, (3) yielding, (4) retention, and (5) action.

Various widely-used social-influence situations used in laboratory studies of persuasion include: (1) suggestion situations, e.g., hypnosis; (2) conformity situations, e.g., communicating the nonative beliefs of a peer group; (3) group discussion situations; (4) persuasive messages, e.g., the effects of mass media; (5) intensive indoctrination, e.g., child-rearing, brainwashing. Each of these situations allows for different amounts of variance between reception and yielding.

The five components of communication are discussed in detail.

Source Variables

Most attitude change research has involved experimental manipulation of the purported source, rather than the actual tactics of real sources. The author reviews the research of source variables: the designs used to vary the perceived source; which of the three components of source valence (credibility, attractiveness, and power) affect the amount of attitude change, including studies of intercomponent conflict; mechanisms that mediate the effect a source has on attitude change, particularly attention, comprehension, and yielding; and the effect of the impact of the source-message as a whole on the receivers' evaluation of the source.

Message Factors

More attitude research has focused on this aspect than on the other classes of communication variables. The author reviews experiments on four classes of message factors: (1) types of persuasive appeal, e.g., fear; (2) inclusions or omissions from the message, e.g., refuting or ignoring arguments, repetition of message; (3) order of presentation within the message, e.g., position of conclusion; (4) discrepancy from the receivers' initial position.

Channel Factors

Little basic research has been done by social psychologists on the variables of the channel through which a persuasive message is communicated. The author considers research on such factors as the persuasive impact of direct observation, the relative effectiveness of the written vs. the spoken word, the apparently negligible impact of the mass media as opposed to face-to-face communication, and what channels are used for innovations in the natural environment.

Receiver Factors

The author here discusses research concerning the state of the person when the message is received, the degree to which the receiver actively participates in the communication, and a person's individual-difference variables as they affect the degree of influence.

Destination Factors

The studies discussed here deal with the target of persuasive communication in terms of which the impact of opinion change is measured, e.g., the long- vs. short-term attitudinal effects, and the direct effect vs. the immunizing effect of resistance to later counterarguments.

The author concludes by presenting four general theories of attitude change:

- Learning theory approaches which have had the most widespread explicit use by experimenters.
- Perceptual-theory approaches, which he considers as complementary and cross-fertilizing, rather than as opposed to learning theory approaches.
- Consistency-theory approaches.
- Functional-theory approaches.

These four broad theoretical approaches are complementary and stimulate research in that they make predictions dealing with different independent variables and different mediating processes. Although each theory has a priori plausibility, suggests intriguing hypotheses, and provokes fine research, none has much empirical validity. But interaction between theory and data leads to a clarification of the problems of attitude research and an advance of the question.

McGuire, William J. Designing communications to change attitudes regarding drug abuse. In: Wittenborn, J.R.; Smith, Jean Paul: and Wittenborn, Sarah A., eds. Communications and Drug Abuse. Springfield, Illinois: Charles C. Thomas, 1970. pp. 79-107. (18 references).

SUMMARY

It is the purpose of this article to explore the possibility that research on persuasion and attitude change can be applied to handling the problems of drug abuse.

This paper describes the information-processing approach, which is probably the most popular and successful of the approaches employed by researchers of attitudinal changes. Also considered are the various categories of communication variables which might affect the attitude change produced.

THEORY

I. The Information-Processing Approach to Social Influence Through Persuasive Communication

The information-processing approach to attitude change involves the notion that a persuasive communication produces the desired behavior change in the target person only to the extent that the person carries out a series of mediating steps.

A. The Dependent Variables: Mediators of Induced Behavioral Change

Information transmission involves a 6-step chain: presentation to the target audience, attention of the target population, comprehension by the target population, target population yielding to the message being urged, retention of the information, and a change in attitude influencing overt behavior. Though it can have great usefulness, this information-processing analysis may not be applicable to all communication-persuasion situations.

B. The Independent Variables: Analysis of the Communication

The communication is the independent variable. This study uses the 5-aspect analysis of persuasion: source, message, channel, receiver, and destination. Each

variable has various sub-headings which are available to the planner. Source and message variables are of the greatest interest to researchers, while receiver and channel have been of little importance to researchers thus far.

C. Use of Dependent-Independent Variable Analysis in Designing Persuasion Campaigns

An effective campaign can be waged by considering the options under each of the communication categories to assure maximum effectiveness. By constructing a matrix of independent and dependent variables, the overall campaign can be designed and evaluated, and specific research findings can be brought to bear on each of the issues.

II. Illustrative Basic Research Implications for a Campaign to Reduce Drug Abuse

The author reviews one variable from each of the 5 communication categories. He discusses these as if they were aimed at the general population.

A. Source Factors

This section discusses the theory that people are more impressed by, and find more credibility in, two categories of communicators. These categories are experts and peers. While both are very influential, one may attract a certain individual, but may distract another. The best source is therefore one who is close to the level of the peer group, but is somewhat higher, and who can speak with a relatively high amount of authority.

B. Message Factors

The fear appeal variable arises in attitude change when the persuasive message stresses the negative results of not complying with the behavior urged. In weighing all of the dependent variables, the best approach toward attitude change is the intermediate approach to fear tactics.

C. Channel Factors

Demonstrations of behavior in a face-to-face or media situation, without explicit verbal communication, prove to be a highly effective way of influencing the observor's own behavior.

D. Receiver Factors

Receiver factors are connected with personality factors. The author theorized that chronic anxiety causes a high persuasive potential, but at the same time the chronically anxious have low attention spans. Appeals to those who have intermediate chronic anxiety are particularly effective.

E. Destination Factors

The target of the campaign may be an attitude change or a behavioral change. It is desirable that an attitude change turn into a behavioral change because then it is felt to be a more or less permanent change.

CONCLUSIONS

Attitude Change and Behavioral Change

The author concludes that attitudinal change does not always lead to behavioral change. Often behavioral change occurs first. Though there can be a change in attitude without a change in behavior, the author feels that planned drug information programs can effectively change attitudes and behaviors.

Alternative Approaches to Attitude Change

There are 3 other approaches to attitude change: the consistency approach, the perceptual approach, and the functional approach. Each of them is valid in different situations, but the author feels the information-processing approach is the best one.

Schwartz, Elaine Silverman. "Changes in Attitudes toward Legalization of Marijuana as a Function of Fear Arousal, Felt Competence and Source Credibility." Unpublished doctoral dissertation. Dissertation Abstracts, 33(10): 1973.

DRUG	Cannabis
SAMPLE SIZE	292
SAMPLE TYPE	Students
AGE	Adolescents
SEX	Both Male and Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	77

SUMMARY

This study was initiated to determine the effects of persuasive messages, either supporting or opposing proposed legalization of marijuana, on changes in attitude toward such legalization. It was hypothesized that attitude change was a function of: (a) self-perceived ability; (b) the side supported by the message; (c) its threat level; and (d) the perceived credibility of the communicator.

It was felt that such research could be of significance for drug education programs. The literature indicates that the usually successful attempts at attitude change based on fear have in this instance been ineffective. The author interprets this as a function of the credibility

of the persons making such attempts. This problem could possibly be avoided through the use of peer counseling.

Attempts were made to define the theoretical frameworks affecting attitude change in order to determine how they may be used to positively affect problems of increasing drug use.

METHODOLOGY

An attitude questionnaire was given to 292 high school sophomores, as well as a competence inventory to assess their self-perception with regard to their ability to relate to drug issues.

After 2 weeks subjects were presented with 4 persuasive messages containing popular arguments either in support of or opposing the legalization of marijuana. These included both high-fear and low-fear messages, and were attributed either to a peer or a non-peer. Each subject received one message. After reading the message, subjects completed an attitude questionnaire similar to that used as the pretest measure. They were also given a communicator evaluation questionnaire assessing the perceived credibility of the imputed source of the message.

For the purposes of statistical analysis, subjects were divided according to sex and according to attitudinal position on the pre-test measure.

FINDINGS

There was no significant change among females who initially opposed legalization.

Among males initially opposing legalization there was one significant main effect which indicated a tendency to move away from their original position as a consequence of receiving a message in support of that position.

No significant differences relevant to the hypothesis under question were evidenced among males initially in support of legalization.

Females initially in support of legalization showed themselves to be the most susceptible to the interactional effects of source, message and competence.

The hypothesis that peers would be perceived as more credible than non-peers was not supported and the reverse was significant for the anti-legalization females.

CONCLUSIONS

The mixed findings of the study in terms of effecting positive attitude change within drug-using student populations prohibit recommendations to drug educators. Further research with students is necessary to understand the complicated interaction among source, competence, threat and message.

Horan, John J., and Swisher, John D. "Effecting Drug Attitude Change in College Students via Induced Cognitive Dissonance." Paper presented at the annual meeting of the Educational Research Association, April 6, 1972, Chicago, Illinois. 8 pp.

DRUG	Cannabis
SAMPLE SIZE	34
SAMPLE TYPE	Students
AGE	Adults
SEX	Both Male and Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Pennsylvania State University, Pennsylvania
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	6

SUMMARY

The purpose of this study was to test the extent that the attitudes towards drugs of new students in a large state university could be modified in a conservative direction by inducing cognitive dissonance during freshman orientation procedures. The authors noted that many college forums on drug abuse seemed to be based on the covert assumption that college students armed with new cognitive input would wage a never-ending battle against the period of peer and personal addiction. However, few systematic evaluations of drug education have ever been attempted and the scant evidence that does exist suggests negative, or at best, null effects.

The authors found that the changing of drug attitudes in a conservative direction culd be accomplished through simple, but potent cognitive input techniques based on the earlier work of L. Festinger and M. Rokeach.

Festingar noted that dissonance between two cognitions is psychologically distressing and that individuals experiencing such a disparity are motivated to seek a state of consonance. Rokeach observed that dissonance can be induced by exposing a person to information designed to make him consciously aware of states of inconsistency that exist chronically within his own value-attitude system below the level of his conscious awareness.

This suggested that if a counselor or personnel worker could identify an unknown or at least unverbalized value that a given student has which is inconsistent with the holding of a liberal (pro) drug attitude, following the presentation of such information, the student's attitude (and probably his behavior) will shift in a more conservative direction.

METHODOLOGY

Thirty-four male and female undergraduates, predominantly new freshmen, who attended a seminar on drug problems during orientation week at the Pennsylvania State University were randomly assigned to an experimental and a control group. They were then pre- and posttested an hour and a half later on the 14 item attitude segment of the Drug Education Evaluation Scales developed by Swisher and Warner. An 18 item value-preference inventory of the authors' own making was also employed. This sorted the sample into two groups: those preferring direct experiences and those preferring mediated experiences.

The authors noted that upon receiving personal value information students who prefer direct experience could be expected to become dissonant and thus more conservative in their views on drugs. Since drugs are really another way of mediating experience, attitudes of students in the latter camp ought to remain unaffected.

After the control group was pretested on the attitude measure, all students were instructed to complete the authors' own questionnaire, which was introduced as an "activities preference scale." This was self-scored so that each student learned of his own preference for direct or mediated experiences. Following a brief summary about the debatable nature of drug effects the group leader stated: "No matter how you resolve these issues, the best that can be said of drugs is that they are mediators of experience. Therefore, if you favor drug use but also prefer direct experiences you are being inconsistent."

The students were then asked for their reactions to this point of view. Those who agreed were verbally reinforced. A request by the group leader for written opinions was followed by posttesting of the experimental group on the attitude scale. A fixed effects two-way

analysis of variance was employed in order to examine differences in drug attitudes arising from the experimental treatment or the value preference of the students (implying high or nil dissonance, and the interaction between these two factors).

FINDINGS

Students who preferred direct experiences and who were made to feel dissonant about holding liberal drug views showed considerably more conservatism in their attitudes toward drugs than similar students who had not yet been exposed to the experimental treatment.

Students who preferred mediated experiences and who were thus not made to feel dissonant during the experimental treatment, presented essentially the same attitudinal posture as similar students in the control group. A slight directionality toward liberalism in the control group was noted but the authors cautioned this should be interpreted with extreme caution.

CONCLUSIONS

Although the experimental treatment worked as expected, the authors noted that the sample of this study was small (N=34) and limited to new freshman who selected this particular program from several others available. However, it provided promising implications that the changing of drug attitudes can be accomplished through a simple, but potent technique.

III. COMMUNICATION PROCESSES

Rommetveit, Ragnar. Verbal communication and social influence: A theoretical framework and some reflections concerning implications for public education on drugs and drug abuse. In: Wittenborn, J.R.; Smith, Jean Paul; and Wittenborn, Sarah A., eds. Communcation and Drug Abuse. Springfield, Illinois: Charles C. Thomas, 1970. pp. 69-78. (12 references).

SUMMARY

This paper examined message transmission in social action and in planning of information campaigns on drug abuse. A thorough analysis of the social setting in which verbal communication takes place, including networks of tacit presuppositions, was urged.

THEORY

The message which is communicated from the speaker to the listener is to a large extent determined by the inclusive communication setting in which it is embedded. Tacit presuppositions on the part of the participants in the communication process are involved. As an ultimate prerequisite for message transmission, there must be a shared domain of objects and events. In communicating a message about a shared domain of objects and events, the speaker goes through a process of encoding, and the listener decodes this transmission. The process of decoding is depicted as the listener's subjective cognitive representations of word meanings.

In the process of encoding and decoding, the speaker and listener are influenced by interpersonal differences of interpretation, as well as considerable variation in semantic input of different social situations. The relation between the overt verbal communication and the extralinguistic, socially defined situation in which it is embedded is a bidirectional one. Tacit presuppositions concerning the extralinguistic context will partly determine what may be conveyed by verbal elements, and what is being said may serve to structure the entire communication setting.

Words suchas drugs, dependence, or abuse are more or less ambiguous. Because of this ambiguity, and because of the different community relationships to drug exposure, it is difficult to formulate an effective verbal communication campaign on drugs and drug abuse. The establishment, the addict, the potential addict, and other categories of potential receivers of the message represent a wide variety of backgrounds. The public educator thus encounters a series of dilemmas. If he wants to reach one unit of the population he will alienate another unit. The only solution to

such a dilemma is to use a neutral language, which may be difficult to implement, and may also be ineffective.

CONCLUSIONS

The author concludes with several questions: What is known about the spectrum of different backgrounds and presuppositions concerning drugs on the part of the recipients of potential communications?; Who is being addressed by any particular segment of the drug program?; Will the program make people more aware of inconsistencies inherent in our present institutions dealing with sales, prescription, and legal sanctions? The author sees the need for expansion of the scope of inquiries into communication about drug abuse far beyond the world of narrowly defined facts.

Smith, Jean Paul. Drug communication processes: problems and targets. In: Wittenborn, J.R.; Smith, Jean Paul; and Wittenborn, Sarah A., eds. Communication and Drug Abuse. Springfield, Ill.: Charles C. Thomas, 1970. pp. 133-146. (9 references).

SUMMARY

This paper assumes that there are two ways in which people view drugs: as intrinsic or as functional. People who see drugs as having intrinsic properties, see these chemicals as being bred by nature. People who see drugs as having functional properties assume that drugs may serve useful purposes as well as harmful ones. In this paper a modified functional view is taken, grouping the possible purposes drugs can serve into 3 areas: medical or therapeutic, abuse or misuse, and recreational. These groupings are based on how the drug is acquired and its intended use. Since these functions overlap, they are neither exhaustive nor mutually exclusive when applied to any particular drug.

Medical or therapeutic drugs are those considered to be beneficial to mankind, though they can be harmful. Drugs labeled as of abuse or of misuse are drugs not sanctioned by our society. Recreational drugs are those used to bring about relaxation, such as alcohol and tobacco. Within each of the 3, socially beneficial and detrimental qualities are found.

In communication, the injection approach has been superseded by the activation theory, which can lead to harm in an area that is already confused and alarmed. What is needed is to shift to the idea of drug communication as a mediating influence, interacting with other more permanent and powerful forces which mold attitudes.

Major determinants of the communication message are: the content and level of concern expressed in the message, the nature and level of public concern about drug abuse, and the source of the message and the appeal it makes. Nine check points are given to evaluate communications. Targets are divided into primary or life-oriented, and secondary or task-oriented groups, with the family seen as the single most important target.

Descriptions of the Communication Process

There are 3 types of approaches to the communication process, the injection, activation, and mediation approaches. The injection approach sees communication as a linear, direct message to a

receiver with an immediate effect. The activation approach most commonly used in the drug abuse field, is the arousal approach. Unlike the injection approach, the activation approach ignores the social context of the particular problem. The mediating approach is more flexible in general, tending to influence other processes already in motion.

A common set of criteria may be used to evaluate the approaches to the process of communication. These desirable criteria are: to inform, to persuade, and to entertain.

The Communication Process

The basic elements of the communication process in the drug abuse field are: the source of the message and its credibility; the message itself and the level of concern it shows; and the general level of public concern about drug abuse, or the social field into which the message is placed.

The message which is presented must show concern for the target group it is meant to affect. Every communication carries with it an implied concern about the risk to the user. The risks include physical, psychological, and phenomenological aspects. Messages may contain emotional or cognitive elements.

Multiple Targets of Drug Abuse Communication

General messages help foster an ideology of drug respect, helping people to learn attitudes useful in handling any drug. A better understanding by all of drug related behavior should result from general messages.

Specific targets may be selected according to whether primary or secondary prevention is the goal. In identifying the target group many questions can be asked to evaluate the direction of the effort (to what degree is the target group really a group? How is the group defined?).

The target may also be divided into primary and secondary target groups. A primary target group is life-oriented, of which the family is of prime importance. A secondary group is task-oriented and of much less importance.

CONCLUSIONS

The goal of a communication program should be to induce people to look at their own drug use as a serious matter. A second goal is to portray the drug abuser as a person in need of aid in order to encourage him to contact drug agencies.

Evaluation of communication techniques used would provide help to future general campaigns.

White, Elna H.; Schoolar, Joseph C.; and Cohen, Charles P. Psychological barriers to communication in drug abusers. In: Wittenborn, J.R.; Smith, Jean Paul; and Wittenborn, Sarah A., eds. Communication and Drug Abuse. Springfield, Illinois: Charles C. Thomas, 1970. pp. 253-263.

DRUG	Not Specified
SAMPLE SIZE	80
SAMPLE TYPE	Treatment (inpatient)
AGE	16 to 33 years of age
SEX	60 Male and 20 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Houston, Texas
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	2

SUMMARY

This study examined communication among drug patients, parents, and therapists. It is not claimed that the patients represent the drug abuse population generally, as they all were heavy users and multihabituated.

The report dealt with 2 sets of statistics. (1) One set dealt with the interpersonal viewpoints of the addicts. Although self-deceptive, the patient was self-satisfied; he did not identify with his parents; the Establishment was seen as dangerous and as allied with rationality;

discipline, though valuable, was seen as ugly; freedom was most highly valued; he saw himself as happy. (2) The other set of statistics dealt with semantic differences between groups. It was shown that there are tremendous barriers between groups, depending on attitudes toward drug abusers.

METHODOLOGY

Three techniques were used in this study: the interpersonal system developed by Leary, the Osgood semantic differential technique, and a Likert-type attitude scale. Remarks in this study concern only the first 2.

Drug Addicts' Interpersonal Reactions

Forty patients and 40 students from the Counseling Center of the University of Houston, were given psychological tests in the form of questionnaires. Three standard psychological tests were given: the Minnesota Multiphasic Personality Inventory (MMPI), the Thematic Apperception Test (TAT), and the Interpersonal Check List (ICL). The patients ranged from 16 to 33 years of age. There were 30 males with a mean age of 21.6 and 10 females with a mean age of 20.7. The control group from the Counseling Center of the University of Houston was matched for age and sex.

Semantic Differential Technique

A sample group of 30 subjects was examined for semantic differences. A questionnaire was administered to determine the subject's attitude toward words which the researcher considered commonly associated with the Establishment or the drug culture. Responses were rated and compared.

FINDINGS

Interpersonal Reactions

Almost one-half (19) of the drug abusers felt others saw them as being hostile, sarcastic, and guilt provoking. None of the 40 drug abusers felt the world saw them as cooperative, conforming, or self-effacing.

The majority of the drug abusers saw themselves differently than they felt the world saw them. The author felt this indicated self-deception. Most drug abusers saw their "ideal self" as they already viewed themselves, which evidenced a lack of motivation to change.

At the level of basic intentionality or underlying character structure, both groups differed significantly from each other ($X^2 = 23.14$; $p < .01$). Thirty-four of the drug abuse group rated "weak" in basic intentionality; this level differed greatly from their own evaluation

of themselves, in which they rated themselves "strong" in love and conformity. The basic intentionality of the control group showed 20 with predominant ratings in strength and love, and 20 with dependency, distrust, and rebellion. Ten of the control group tended to identify with and strive for conformity, compared with none of the drug abusers.

The drug abusers rated their parents entirely differently than they rated themselves. A lack of attitudinal agreement was indicated and therefore a lack of communication.

Semantic Differential Technique Results

In this part of the study it was shown that there was a lack of connotative agreement on certain concepts vital to the areas in question. The results showed that the addicts rated LSD extremely valuable, quite good, and extremely dangerous. This indicated to the author an ambivalent attitude toward LSD. The results also showed that most drug addicts thought of the Establishment as dangerous, hateful, and slightly worthless.

CONCLUSIONS

The authors indicate there is an obvious gap in communication between the therapist and the patient, but that it is not impossible for the gap to close. In order to accomplish this, the therapist must recognize the attitudes and human dignity of the drug abuser, yet he must recognize with equal clarity the addict's need for constancy in dealing with contradictions, ambivalence, and the search for instant gratification.

Soloway, Irving H. "Videotape Recording of Narcotic Addicts in Group Therapy: The Analysis of Communicational and Interactive Behavior." Unpublished thesis, 1971. 77 pp.

DRUG	Opiates and Methadone
SAMPLE SIZE	4
SAMPLE TYPE	Treatment (outpatient)
AGE	Not Specified
SEX	3 Male and 1 Female
ETHNICITY	1 Black and 3 White
GEOGRAPHICAL AREA	Philadelphia, Pennsylvania
METHODOLOGY	Case Study
DATA COLLECTION INSTRUMENT	Observations
DATE(S) CONDUCTED	1970
NO. OF REFERENCES	40

SUMMARY

This study was designed as an attempt to develop an alternative to the participant observation method, traditionally used by cultural anthropologists, which would predict social behavior. Focusing on analysis, through the use of video-tape, of non-linguistic communication, a group of patients being treated for opiate-addiction was studied. The author compared the approach used to that of linguists in that it reduces all behavior to discrete and significant units, common to all actors, whose individuality is expressed through the unique combinations of these units. He

stated that these discrete elements are at a level beyond conscious control, but at the same time exist as "culturally-specific behavioral entities." Once these elements can be identified, Soloway claimed, it will be possible for cross-cultural comparisons to be made, and for behavior to be predicted.

METHODOLOGY

Group-therapy sessions involving 4 out-patients were videotaped in 4 weekly sessions. The group contained 1 female and 3 male patients; the female differed from the others, not only in respect to her sex, but also in that her addiction to morphine is considered among the drug-using subculture as less prestigious than that of heroin, to which the others were addicted. This disparity among the subjects was purposely established by the experimenter in order to assure the presence of an "outsider" for the purposes of the study.

Three interactional "episodes" were described and analyzed. The particular episodes were selected as they all involved various levels of "blocking," i.e. exclusionary behavior directed by the 3 males against the female subject. Sociometric diagrams were presented to illustrate the interactional processes by which such blocking was achieved. The elements used in the analysis included those of : posture; seating arrangement; gaze direction; use of objects present in the room; body orientation; and use of limbs. These elements were used to reinforce the pre-existing status and role configurations among the members of the group, which the author felt were definable in terms of the social organization of the urban drug addict.

FINDINGS

Three predominant communicative mechanisms were isolated and identified. These were : (1) "ecological cues", the seating arrangements purposely selected by the males to put a physical distance between themselves and the female; (2) "proxemic cues", the bodily intrusion of 1 male to divert the attention of the other 2 from the female; and (3) "kinesic cues", an elaborate series of body postures on the part of a male subject to protect himself from the felt intrusion by the female.

CONCLUSIONS

The author suggests that many such models of non-verbal behavior are learned, and that it would therefore be useful to investigate the communicational indoctrination of the individual in his process of becoming a drug addict. This study may help in the identification of the processes by which addicts define the territorial integrity of their social subsystems. The author feels

he has shown sufficiently that the drug subculture is a subtle, complex, and organizationally sophisticated cultural phenomenon, and that clear levels of interaction and cognitive discrimination exist within it.

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INDEXES

The numbers in the indexes refer to the unique identification code found in the upper right-hand corner on the first page of each abstract. Roman numerals reference categories from the Table of Contents; Arabic numerals reference abstracts within categories. It should be pointed out that a given index term refers to an entire abstract rather than to pages within an abstract.

The keyword terms selected for the indexes are those terms used in the literature; no terms were inferred. The most specific term was used whenever possible. Thus, some material on marijuana will be found under that term but other material may be found under the term cannabis. Similarly, studies of heroin use may be indexed under heroin but also under opiates.

For convenience to the reader, the indexes have been divided into the following five sections:

Drugs

Includes general and specific names of all drugs mentioned in the abstract, as used by the authors of the document.

Sample Types

Terms which describe as specifically as possible the sample population studied.

Geographic Locations

Organized by state, the location where the study was carried out; includes also names of universities, schools, drug programs, committees, etc., in the order in which they occur in the abstracts.

Subjects

Terms which describe the subjects or concepts of the studies; included also are names of specific data collection instruments, evaluation tools, and questionnaires.

Authors

All authors named in the citation to each abstract are listed in the author index; however, this does not include all authors of the materials abstracted since documents with more than two authors have been cited with et al.

AUTHORS

Abrams, A. I.20, I.22
Anker, J. II.06
Becker, H. I.04
Bentel, D. I.24
Blum, E. I.06
Blum, R. I.06
Bogg, R. I.05
Carlin, A. II.03
Chow, S. I.23
Clark, R. I.02
Cohen, C. III.03
Cornacchia, H. I.24
Crawford, J. I.26
Ertle, V. I.23
Fejer, D. I.03
Funkhouser, J. I.06
Garfield, E. I.22
Glaser, D. II.08
Goldstein, H. I.16
Goode, E. II.02
Hanneman, G. I.07, I.09, I.10, I.12, I.13
Herr, E. I.27
Horan, J. II.12
Ianni, F. I.15
Johnston, L. II.04
Kanter, D. I.14
Keyes, D. I.23
Kowitz, A. I.02
Krakowski, M. I.01
Macro Systems, Inc. I.25
McEwen, W. I.08, I.11, I.12, I.13
McGuire, W. II.09, II.10
Melman, D. II.06
National Coordinating Council on Drug Education I.18
National Research Council I.21
Pet, M. I.10
Richards, L. I.30
Rommetveit, R. III.01
Schoolar, J. III.03
Schwartz, E. II.11
Smart, R. I.01, II.07
Smith, D. I.24
Smith, J. III.02
Snow, M. II.08
Soloway, I. III.04
Stoessel, R. II.01
Stuart, R. I.17
Suchman, E. II.05
Swisher, J. I.22, I.26, I.27, I.28, I.29, II.12
Wald, P. I.20
Warner, R. I.27, I.29
White, E. III.03
Whitfield, M. I.16
Wittbold, G. I.08, I.11
Woodcock, J. I.19

DRUGS

alcohol I.05, I.17, I.24, I.26, II.02, II.04, II.06, III.02
amphetamines I.09, I.23, I.26, I.28, II.02, II.04, II.06, II.08
barbiturates I.09, I.23, I.26, I.28, II.04, II.06
cannabis I.09, II.02, II.06
depressants I.17, I.23
glue II.06
hallucinogens I.17, I.23, II.04
hashish II.06
heroin II.04, II.08, III.04
Improxin II.03
LSD I.06, I.08, I.12, I.17, I.26, I.28, II.06, II.08, III.03
Librium II.03
marijuana I.01, I.02, I,04, I,05, I,08, I,09, I.17, I.23, I.25, I.26, I.28, II.02, II.04, II.05, II.06, II.07, II.08, II,11

morphine III. 04
opiates I. 09
pep pills I. 14
psychedelics I. 09
solvents I. 17
speed I. 08, I. 12
stimulants I. 17, I. 23
THC II. 03
tobacco I. 05, I. 24, I. 26, II. 04, III. 02
tranquilizers I. 01

GEOGRAPHIC LOCATOR

Arizona
Maricopa County I. 23
California I. 07
Coronado I. 14, I. 23, I. 30
Fresno I. 26
Los Angeles I. 30
Sacramento I. 02
San Diego I. 25
San Mateo I. 19, I. 23
Ukiah I. 23
Connecticut
Hartford I. 07, I. 10, I. 13
Seymour I. 23
University of I. 09, I. 11, I. 13
Florida I. 07, I. 16
Dade County I. 23
State University of I. 16
Tallahassee I. 16
Illinois
Chicago I. 25
Massachusetts I. 13, I. 16
Boston I. 23
Michigan I. 05, I. 16, I. 17
Wayne County I. 23
Minnesota
Duluth I. 23
Minneapolis I. 25
Missouri
Parkway I. 23
New York I. 16, II. 02
East Harlem I. 25
Narcotics Control Commission II. 08
Nassau County I. 15
New York City I. 30
University of II. 06
Oregon I. 23
Pennsylvania
Philadelphia I. 23
State University of II. 12
Rhode Island I. 13
Texas I. 16
Laredo I. 23
Lubbock I. 25
University of Houston III. 03
Virginia
Richmond I. 25
Wisconsin
Milwaukee I. 23

Canada I. 03, II. 07
Addiction Research Foundation (ARF) II. 07

SUBJECTS

administrators I. 22, I. 24
advertising I. 08, I. 09, I. 11, I. 12, I. 13, I. 14, I. 15, I. 21
Advertising Council I. 07
anthropologists III. 04
Association IV (test) II. 03
attitude index I. 28, II. 04
audio-visuals I. 18, I. 20
authoritative source I. 30
Bad Trip I. 12
Bill Cosby: Speed Kills I. 12
body orientation III. 04
books I. 25
clergy I. 02, I. 05, I. 25
clinics I. 20, I. 25
Color Naming (test) II. 03
community consultants II. 07
computer terminals I. 10
content analysis I. 10

Creative Learning Group Drug Education Program I. 23
crisis centers I. 20
curricula I. 20, I. 24
curriculum directors I. 24
Digit Symbol (test) II. 03
drama I. 30
Drug Abuse Council I. 22
Drug Abuse Decision System (DADS) I. 23
Drug Attitude Inventory II. 01
drug education approaches I. 26, I. 27, I. 28, I. 29, I. 30
drug education evaluation scales II. 12
Drug Experience: Data for Decision Making (program) I. 23
Drugs: Insights and Illusions (program) I. 23
drug mobiles I. 20
elementary schools I. 23
emergency treatment I. 10
encounter groups I. 25, I. 30
films I. 02, I. 08, I. 11, I. 15, I. 18, I. 20, I. 25, I. 30
group counseling I. 27, I. 29
group therapy III. 04
Hidden Figures (test) II. 03
high schools I. 03, I. 26, I. 27, I. 28, I. 29, I. 30, II. 03, II. 11
hot-line I. 10, I. 20, I. 25
Impact Plus Two (program) I. 23
Interpersonal Check List (ICL) III. 03
junior high schools I. 17
law enforcement I. 24
lectures I. 25, I. 26, I. 30
legal information I. 10
legal penalties I. 25
legalization II. 07, II. 11
LEMAR II. 02
logical argument I. 30
LSD the Wonder Drug I. 12
mass media I. 09, I. 12, I. 20, I. 21, II. 09
Minnesota Multiphasic Personality Inventory (MMPI) III. 03
music I. 02
National Clearinghouse for Drug Abuse Information I. 07, I. 09, I. 16, I. 25
National Commission on Marijuana and Drug Abuse I. 15
National Coordinating Council on Drug Education I. 18, I. 20, I. 24
Neighborhood Junkie I. 12
news media I. 02, I. 15
non-verbal behavior III. 04
nurses I. 24
parents I. 02, I. 20, I. 25, III. 03
peers I. 30
physicians I. 02, I. 05
physiological measurement I. 12
police officers I. 05, I. 25
posters I. 21, I. 25
Public Service Announcements I. 13, I. 07
Pursuit Rotor (test) II. 03
radio I. 02, I. 14, I. 15, I. 16, I. 20, I. 21
rap sessions I. 25
rehabilitation I. 24, I. 25
seminars I. 25
school counselors I. 05, I. 24, II. 12
siblings I. 02
television I. 02, I. 07, I. 11, I. 15, I. 16, I. 20, I. 21, I. 25
teachers I. 02, I. 05, I. 24, I. 25
teacher training program I. 23
Technicon Drug Decision Program I. 23
Thematic Apperception Test (TAT) III. 03
therapists III. 03
Time Estimation (test) II. 03
treatment programs I. 25
The Truth About Marijuana I. 12
videotape I. 20, III. 04